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Joseph H. Raymond, M.D.

Fred. D. Bailey, M.D. Alex. Hutchins, M.D.

Wm. M. Hutchinson, M.D. Wm. Browning, M.D.

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IOHANNES HEURNIUS,
Medicinæ Professor.

THE

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CHRONIC CORPOREAL ENDOMETRITIS.

BY WALTER B. CHASE, M. D.

Read before the Brooklyn Gynæcological Society, June, 2, 1893.

The hour, alloted for the scientific business of the evening, will not permit an exhaustive discussion of the topic under consideration, and as particular importance attaches to treatment of this rather intractable disease, its ætiology, symptoms and pathology will receive only incidental notice.

I cannot flatter myself that I shall be able to bring to your attention much that is new or original in the consideration of this topic, but shall endeavor to emphasize some points of treatment which my own observation and experience seem to warrant as valuable and conducive to the best attainable results. It is needless for me to recount the difficulty of treatment, the limitations of our resources and the failure which so often attends our best directed efforts, but, notwithstanding the fact that the ideal has not yet been reached, it cannot be denied that somewhat recently, substantial advance has been made in the management of these cases.

There are some preliminaries to local treatment which are worthy of careful consideration. Of the first importance may be mentioned the general health of the patient which often bears a close relation to, and is one of the important factors in the ætiology of endometritis. So far as possible, general healthy activity should be established by both hygienic and therapeutic measures. If constipation is present it must be corrected, and, unless some contraindication forbids, the use of salines is likely to be of benefit, as they exercise some positive influence in depleting the vascularity of the organs of the pelvic cavity. If the chronic inflammation of the endometrium follows pregnancy at full term, or succeeds an abortion and is associated with subinvolution, the administration of ergot, hydrastis canadensis. the iodides and arsenic, together with the hot vaginal douche, may be of value in hastening the delayed metamorphosis. Proper activity of the skin should be promoted by friction, massage and appropriate baths, the cool or cold bath being preferable, if the patient possesses sufficient vitality to insure healthy reaction.

Nutritious food and appropriate exercise should be insisted upon, and every cause which produces physical impairment or mental unrest should, as far as possible, be eliminated. If the patient has borne children and has suffered any of the injuries incident to parturition, as cervical laceration with eversion and erosion or tear of the perineum, which has destroyed the integrity of the pelvic floor, their repair may be the first slip towards a cure.

You have all witnessed, how, under such conditions the results of a well executed trachelorrhaphy have proved to be the key to the situation, hastening involution and diminishing the depth of the uterus to half an inch or an inch, but in this operation under these conditions care should be exercised that the cervical canal be not unduly narrowed, as the subsequent treatment might require space for the introduction of instruments or applications to the endometrium and drainage. Another distressing symptom, sometimes present, due to enlargement of the uterus, greatly annoys the patient and interferes with locomotion; this is descent of the organ causing strain upon the uterine ligaments, and pressure on the pelvic viscera. Two or three methods of treatment give more or less prospect of relief and are in their operation both palliative and curative. Tamponades of lambs' wool, previously immersed in sterilized glycerine or boroglyceride are packed all around the cervix, in separate pledgets, each of which has a thread attached, while the uterus is elevated, enough being used to support its weight. The better position for their easy introduction is to have the patient either in the Sims or the knee-chest position, usually the latter with the perineum retracted and elevated with the Sims speculum, when the uterus spontaneously recedes towards the diaphragm, which position relieves the venous engorgement and gives more room for easy and accurate placing of the tamponade. The value of lamb's wool, over cotton—natural or absorbent—is, that it is elastic, and comparatively incompressible even when saturated with fluid. Its presence—by the principle of osmosis—from the copious watery discharge it produces, depletes the uterine blood-vessels and thereby diminishes the size and weight of that organ. The packing may remain from twenty-four to seventy-two hours, before renewal, being succeeded by a copious hot-water douche, and this treatment continued during the intermenstrual period, for such time as it appears to be of benefit. If the disposition to descent of the uterus is relieved to a good degree and the uterine tenderness has diminished or disappeared, and farther support is required, resort may be had to a ring pessary. Other forms of displacement, forwards or back-flexions or version should, as far as practicable, be remedied, and in all these conditions the wool tamponade may be of the greatest value in the preliminary treatment, used according to the indication of every individual case.

Endometritis (chronic) is sometimes associated with circum-uterine inflammation, cellular or peritoneal. In such conditions the use of Churchill's tr. iodine applied to the vault of the pelvis or Douglas' cul-de-sac, and followed by the wool tamponade will be of the highest value and prepares the way for more successful management of the case. To make the hot water douching effectual and beneficial to the highest degree, it should be used very hot, 110 to 120 Fahrenheit—to the amount of two or three gallons—with the patient in the dorsal position, and the hips elevated so that the vagina is kept constantly distended. The medicament added to the water may consist of chloride of sodium, boracic acid, hyrastis canadensis, or any other alterative or astringent indicated. Another procedure worthy of trial, the value of which has not, I believe, been properly appreciated, or sufficiently employed, is position. Place the patient in bed, elevating the foot of the bed from six to eighteen inches. In stubborn cases this may be continued for weeks at a time.

There is no doubt as to to its efficacy in pelvic congestions and inflammations as has been demonstrated by Dr. Emmet, combining with such other measures as may be indicated. The principal objection to the adoption of such a course will be found in the unwillingness, or perhaps inability of the patient to sacrifice the time necessary to its proper observance. The method of treatment has in it the virtue of innocence, for it involves none of the hazards of heroic measures to which the patient sometimes refuses to submit. Again, local depletion has its advocates, and, though not a fashionable remedy has its uses. The method of intra-uterine scarification prepared by Stores, and sanctioned by Thomas, finds few, if any supporters. Probably its limitation is that of puncture of the cervix, in the hope that it will influence the whole uterine circulation. I am of the opinion there is good reason to suppose, though it may be difficult of demonstration, that the apparent benefit to different forms of chronic uterine inflammation following the repair of slight laceration of the cervix in certain cases, is due more to the positive depletion of the uterine circulation from the hemorrhage attending the operation than from the restoration of the parts. Under the head of hygienic management, trial may be made of change of location and climate, and an ocean voyage with foreign travel may be of signal and lasting benefit.

From the surgical standpoint the condition desired, as *sine qua non* to success is *free drainage.* In uteri which are not flexed and in which neoplasms do not obstruct or render the uterine canal tortuous, drainage is usually easily established, if not already present. If the cervical canal is not sufficiently open to insure easy escape of the uterine secretions, success will not be likely to follow treatment.

No effort will be made in this paper to draw fine distinctions as to the forms of chronic endometritis, but for the purpose of clinical study this may be divided into:

1st. Septic.
2nd. Simple.
3d. Hemorrhagic (endometritis polyposa.)

The difficulty of destroying the gonococcus is so great, that when it finds its habit at in the endometrium, time and patience, with the use of germicides, will be required to successfully cope with it, and then failure is probable with the chances that the tubes will be or have become involved. The treatment of the simple variety—in which complicating conditions have been absent or have been overcome, are suitable cases in which local alterative treatment offers chance of successful use.

There are some points to be studied before entering upon treatment which may be determined by the sound, viz., the depth, location and sensitive areas of the uterine cavity, together with the liability of hemorrhage from touch. By the same means the caliber of the cervical canal and the size of the internal os may be determined. Thorough bi-manual palpation—the most valuable of any single method of diagnosis of the condition of the pelvic organs—will aid in locating and determining any other diseased condition. On general principles, there seems to be no valid reason why this condition should not like other local inflammations, yield to local treatment, but on this point it must be acknowledged there is a wide divergence of views. The more conservative regard their use as dangerous, while others have boldly applied escharotics to the diseased structures to a degree which is positively dangerous.

It is safe to assume that internal applications should be used with great circumspection and never applied unless there is adequate drainage. Among the remedies applicable is iodoform, glycerine and iodine, (equal quantities), iodoform can be applied incorporated in cocoa butter; the fluids by an applicator covered with absorbent cotton, or better, by Dr. Skene's method in the use of a glass pipette, guttatim, curved to correspond to uterine canal. To my mind a few drops of the iodine and glycerine, equal quantities, is among the best. Iodine is highly antiseptic, stimulating, alterative, and promotes absorption. Its great value is not alone in the properties mentioned, but as well in its diffusibility. Probably 5 minims. thus introduced with the patient in the Sims position, will quickly diffuse itself over the entire uterine cavity, and it is not likely to occasion uterine colic or subsequent distress. Its diffusibility and rapid absorption is proverbial. Repeatedly, patients have assured me they could taste it immediately after rising from the table. Another valuable alterative is aristol. This may be dissolved making 10 per cent. solution in alboline. There has been and still is among conservative gynæcologistes a feeling, which I have myself indulged and respected, that heroic measures, directed to the uterine cavity were of doubtful propriety and on the whole to be deprecated, and so far as caustic applications are concerned in this ailment, I hold o my former views. The degree of success which the most careful and patient use of these local applications bring, will be in some degree commensurate with the conditions under which they are used, and the perfect control had over the patient. I am convinced that the highest advantages come not from treatment in the office, at intervals of two or three days or a week, but when the patient can be under constant and intelligent observation in hospital practice (preferably a private hospital) where every detail of treatment shall be exact and specific.

Regarding the risk of instrumentation, where methods more positive are required, the evidence is becoming almost conclusive that the danger is not so much from traumatism as from sepsis.

As pertinent, this is Goodell's experience in nearly 400 cases of forcible dilatation of the cervix, in which he says—and that is very recently—that he has had following it but one case of inflammatory trouble and that was a mild case of peritonitis. It should also be remembered that Goodell in the cases in which he has operated, carried the dilatation up to 1 inch and 1¼ inches—a degree which seems rarely to be required—and must result in some tearing of cervical tissues.

This brings us to consider the combined influence of dilatation of the cervical canal and curetting of the uterine cavity, for the relief of cases which have resisted the simpler methods of treatment. If the cervical canal will not easily afford room for packing the uterine cavity, dilatation may be resorted to. Tents of any kind should never be used, as they involve too great risk of injury to the cervical tissues and septic infection. If slow dilatation is decided upon, Hank's hard rubber dilators may be employed, their curve being varied by heat to meet the indication in the individual case.

If rapid dilatation is selected, which is usually the better method, Hanks's instruments may be advantageously used, if the conditions admit of counter-pressure being made over the fundus by an assistant, but if this cannot be done the grasp of the cervix by the tenaculum is liable to tear out and unnecessary injury is thus inflicted on the cervix.

What I prefer is some instrument with blades, neither too large nor too small, which moves parallel or nearly so, which can be made to expand by a screw, thus keep up continuous and increasing pressure, done under full anæsthesia.

Walten's dilator is an admirable instrument. If the cervix is resisting, from 15 to 30 minutes should be taken for the dilatation so as to give the circular fibre of the cervix time for relaxation. If flexion of the cervix is present Wylie's dilator is best. For this purpose a dilatation of ⅝ or ¾ inch is sufficient As the cervix opens the parts should be douched with hot antiseptic solution, carried to the uterine cavity before any instrument is introduced. If the impaction of the blades have caused any abrasion of the cervical tissue it should be touched with pure carbolic acid. After having disinfected the uterine cavity the way is prepared for treatment.

Topical applications may then be made or the curette used. If it is a case of fungoid degeneratian the blunt curette may be gently and systematically applied over the whole endometrium, at the same time continuing the douching. An educated touch will decide when the work is thoroughly done, at which time hemorrhage usually abates or is wholly arrested. The cavity may then be dried and packed, or drained with sterilized 5 per cent. iodoform gauze. With gauze containing 10 per cent. of iodoform there is risk of iodoform poisoning. This tamponade may remain from 1 to 3 days if not expelled by uterine contraction. In some uteri packing will not be tolerated, and a strip of gauze reaching to the fundus may be used to assist drainage.

After douching, the cavity may again be packed or alteratives applied according to indications. It cannot be affirmed that this method always brings desired results, but unless there are contraindications, to which I shall presently allude, it offers hope in cases where less radical measures have failed. Neither can it be claimed that such practice is absolutely without danger, yet the risk taken is small under proper precautions, and in view of the suffering and inability of the patient to perform her ordinary duties may be conscientiously undertaken. I confess to a change of sentiment in these particulars, other measures proving ineffectual, the conditions justify the method, and while my individual experience is hardly sufficient to draw independent conclusions from, it goes to confirm the favorable observations of others. In some cases of fungoid degeneration of the endometrium, there is tendency to recurrence and hemorrhage, in which event the curette can again be used.

If the case showed at the outset increased depth of uterine cavity, which gradually diminishes with treatment, there is encouragement to go on, even though the progress is slow and at times symptoms of relapse are present.

The application of the curette to stubborn cases—not hemorrhagic—is oftentimes of the greatest value, and marks the commencement of permanent improvement. After the use of the curette for a period of a month or two, local applications may exert a happy influence over the progress of the disease.

As time is often an important factor in accomplishing all that skill and patience can suggest, it is better at the outset that the patient understand the situation and the unavoidable elements of uncertainty which enter into it.

The influence of sexual intercourse on the disease is such, that in women of erotic temperament, it might conduce to hurtful congestion, and it may be necessary that it be limited or interdicted.

Prolonged attitude in the erect position, fatiguing walks and especially lifting, may in cases in which the uterus is heavy and inclines to descent be hurtful, and seriously retard or prevent improvement. Care should also be exercised that the clothing be so supported as not to obstruct the pelvic circulation or occasion pressure on the abdomen.

Contra-indications. As a rule dilatation and the use of the curette should not be employed in the presence of pus tubes, except as preliminary to their removal, in the treatment of endometritis—neither should intra-uterine treatment be instituted, unless there is *ample room* for drainage. It is also desirable that, as far as practicable, the first step in the treatment in all cases should be the rendering of the vagina, cervix and uterine cavity aseptic. So the chronic inflammation of the cellular and peritoneal structures of the pelvis claims priority as to treatment, and active treatment of the uterine cavity in their presence requires great carefulness.

To recapitulate, the rules for treatment of chronic endometritis may be formulated as follows :

1. That the general health receive particular attention, both hygienic and therapeutic.

2. That accompanying diseased conditions, as subinvolution, displacements and circum-uterine inflammations receive previous attention.

3. That laceration of the cervix and injuries of the pelvic floor calling for restoration, are first to be operated upon.

4. That rest in the horizontal position with the foot of the bed elevated from 6 to 18 inches, may be of great value.

5. That thorough drainage of the uterine cavity is of the first importance.

6. That caustic applications should not be made to the uterine cavity, but that alteratives are frequently of value.

7. That the curette and packing of the cavity is often useful and truly curative—particularly in the hemorrhagic variety.

8 That all treatment of this disease must be conducted on strictly aseptic principles.

9. That to secure the highest attainable success, time will be required and that the patient should be under the absolute control of the attendant so as to secure perfect detail in all treatment.

DISCUSSION.

Dr. Skene :—All I need say perhaps is that the paper covers the whole ground. I am not aware of anything that is employed in these modern times in the way of treatment of this somewhat intractable difficulty, that has not been mentioned by Dr. Chase in his paper. I was especially interested in his insisting upon taking into consideration the general condition of the patient; and that he did not dwell more at length on the subject was complimentary to us, taking it for granted that we understood all about it, and yet I think we would all have been benefitted by his giving us his experience in building up broken down constitutions from uterine disease, or that condition of the general organism we so often see accompanying those local troubles.

I will refer to a few points in the paper, more to say that I entirely agree with him, perhaps, than to make any additions. Of course we all accept the general management with the tamponing and douching, and so on, which gives us the best results when the inflammatory trouble is limited to the cervix.

With reference to the question of the treatment of corporeal endometritis, there are some points which I have no doubt he had in mind but did not bring out—some points where I, perhaps, would venture to differ with him in some small details. First of all, in reference to dilatation. In order to do that with great safety, preliminary treatment of the cervix is very essential, I believe. I make it a rule to completely empty the cervical canal of all secretion with the dull curette, and then thoroughly disinfect it by washing out repeatedly until the hemorrhage ceases, or nearly so, and I feel quite confident that there is no septic material there. If this is done, dilatation to a moderate extent is always safe. We are not likely to get any trouble in the body of the uterus because dilatation is limited to the canal of the cervix, and if we do not carry septic material from the cervix up into the body of the uterus no harm will be done. I would urge, then, a more careful treatment of the canal before dilating. I entirely agree with him in the lack of necessity for extreme dilatation. I know of no advantage in it, and as many times damage is done by it, I think it should be avoided in all cases. It was first introduced to cure flexion where it was presumed this extreme dilatation was necessary so as to change the tissues, so that the bend of the uterus would not recur, but I do not think it is necessary even in that condition.

In reference to the dilator to be used, the Goodell, or one on the Goodell principle in which the blades dilate parallel, answers every purpose. I think the doctor mentioned Gill Wylie's dilator. There is one that goes by his name, but it involves no principle that was not known before his day.

I would dwell a moment upon the necessity for thorougly washing out the whole canal after curetting or before packing.

In disinfecting and cleansing the cervix before dilatation, and in washing out the cavity of the body after curetting, or when the curette is not used, there being nothing to remove, I now invariably use five per cent. solution of carbolic acid with ten per cent. of glycerine. I have for a long time been satisfied that this is the best germicide and disinfectant by far, and infinitely superior to bichloride of mercury. The more I see of the use of bichloride as a disinfectant and germicide the more I am satisfied that it is not reliable, and for this reason: if a solution of bichloride of mercury of any ordinary strength be applied to a mucous membrane, the effect is that it simply coagulates the albumen in the tissues and forms a crust beneath which germs remain alive. It does not burrow into the tissues like iodine or carbolic acid and glycerine. So for all purposes I have come back to the use of carbolic acid, and I see that Sir Joseph Lister has come back to his first love, in this respect. Before I read Lister's recent writings on the use of carbolic acid I had been coming to depend on it more and more. I thought sometimes that I might be wrong, or not judicious, but when I found that the greatest authority had been doing so, I felt that it was all right.

I was glad to hear the doctor say that he recommended the use of the dull curette. In all inflammatory affections requiring curetting I have used it. The use of the sharp curette has been urged in these cases of endometritis. Some of you may have read the discussion in the New York Obstetrical Society in which one gentleman said not only was the sharp curette essential, but he had no hope of the man who used a dull curette ever becoming a good surgeon. The only thing that one can do, that is if he is to be taken as the highest type of surgeon, most of us would be satisfied not to become even good or fairly good surgeons. In the first place the claim is that you cannot remove all the tissue with the dull curette. You can remove all the neoplastic tissue except that in the deeper portion of the utricular glands. The germs may extend further into the tissues, but if you insist upon removing all the utricular glands by the sharp curette, you destroy the entire endometrium and about two-thirds of the wall of the uterus, and there is hardly anything left. Hence I am perfectly sure that the sharp curette should not be used for any purpose in the treatment of endometritis.

In reference to the question of drainage, Dr. Chase made the statement that in cases of inflammation, first the uterus should be restored to its normal position, if dislocated; if there was an injury the injury should be restored in due time. If this is accomplished at the outset then drainage is perfect. I do not think there is any better drainage tube than the uterus when it is in its proper position, when there is no stenosis, or bend in the uterus. Taking for granted that it is normal in form and position the drainage will be good, and yet how is it we get so much benefit by packing after dilatation and curetting?

I believe it is the application of the packing material that acts as an aseptic dressing to a wound, keeps up pressure and does not obstruct drainage. I am sure the drainage of a uterus packed with gauze is not more or better than without it. The drainage tube will keep up drainage if it does not fill up the canal. We see that with the stem pessary. The drainage must be sufficient to remove the abnormal secretions. I think this packing of gauze is valuable, but I believe it is due to the fact of its pressure and not alone the drainage, and that leads me to use a gauze which has a better effect than any other, and that is gauze saturated with carbolic acid and glycerine, 1 to 8. That will remain sterile a longer time than iodoform, forty-eight hours longer, and much longer than that used by the great advocate of packing, Dr. Polk. He uses simply a gauze sterilized by bichloride of mercury. He then dips it in warm water before applying it, which I think washes out all the bichloride. It is a clean gauze, sterilized and moist, and he leaves it in three or four days or until it is expelled. I have tried that, and at the end of forty-eight hours the packing becomes so odorous, it is necessary to remove it, and I found it swarming with bacteria, but the carbolic acid will keep the gauze sterile for a long time. The point is simply this, that the packing does more good than could possible come from drainage alone, that it is not from the drainage that the benefit is derived. The great majority of these cases can be treated in the way that I have outlined with great advantage.

Dr. Jewett:—The paper has certainly covered the ground comprehensively. There are only a few points in the treatment on which I care to speak. The preponderating factor in the pathology of endometritis, if modern views are correct, is sepsis, and the treatment should be regulated accordingly, draining being an important factor in the treatment.

With regard to dilatation, I see no necessity for dilating more than is required for drainage. I have therefore used a dilator which opens the cervix only about a half inch. It is very important that proper preparation should be had, but I have not practiced curetting the cervix. It seems to me sufficient to merely remove the mucus and disinfect the canal as a preliminary to dilatation.

The method of dilating is important. By opening the blades of the dilator first in one direction, then in another, the cervix may be gradually moulded up with less danger of lacerating than by putting the entire strain upon it in any one direction.

As to the method of treating the cavity, I have not been able to understand the advantage of firm packing. The object is to drain. This object is gained by a few loose strips of gauze, which act mainly by keeping the cervix open. A tight packing may defeat the object aimed at by obstructing the os internum. Only a few days ago, on removing a gauze packing, two or three drachms of fluid followed it. The packing was too firm and the secretions had been dammed up in the uterus. I do not know that the pressure of a tight packing has any therapeutic effect unless, possibly, by provoking contractions it may serve to promote involution.

The length of time for which the drains may be kept in the uterus will vary. I have frequently found them free from bad odor after five days. In endometritis following labor, it is not safe to leave them more than one or two days.

Another point is the choice of antiseptic. Notwithstanding the prejudice against it, I still have confidence in iodoform. Bacteriologists tell us that it destroys the chemical products of germ life. However it acts, I have seen too much clinical evidence of its value to give it up. I frequently place in the uterus one or two ten grain pencils of iodoform in addition to the iodoform gauze. I have them made with tragacanth and glycerine in such proportions as to remain flexible.

Carbolic acid seems likely to become a leading antiseptic again. It is claimed it has the property of killing the organisms concerned in the production of pus and if so, it is a good practical disinfectant. The objection to mercuric chloride that it is destroyed in the presence of albuminous fluids does not hold in case of acid solutions. Nor does this difficulty obtain with neutral solutions of the biniodide of mercury.

As to the kind of curette, I confess, after considerable experience with the dull wire curette, I like the moderately sharp instrument better. That it does not do fatal damage to the endometrium is proved by the fact that pregnancy has occurred even after a thorough use of a fairly sharp curette. This experience has repeatedly occurred to me, recently twice in same patient.

It is not always easy to distinguish between chronic inflammation of the endometrium and beginning cancer. I recall a case which was examined by the late Dr. Hunter and pronounced free from cancer after a thorough curetting, three or four years ago. The question had been raised by reason of a bloody watery discharge. The trouble continuing, I was impressed with the belief that the case was malignant, but the curette did not prove it. Being requested to see the patient again a year or two later, I removed a large amount of cancerous material from the uterus. The point I wish to make is that a chronic endometritis may be the beginning of malignant degeneration, or may lapse into it.

Dr. Raymond :—I think Dr. Skene and Dr. Jewett are at one as to preparing the cervix for dilatation. Dr. Skene spoke of curetting the cervix ; Dr. Jewett says he never found it necessary to curette the cervix but simply to remove the secretion of the cervix and then disinfect. I think Dr. Skene simply meant that that was his method of removing the secretion from the cervix when sometimes no other means can be used to get rid of it satisfactorily. Anyone who has had to remove secretions from the cervical canal must know the value of the curette. I think Dr. Skene simply means the use of the curette for cleansing purposes.

Dr. Jewett : I would like to know if any gentleman present has seen any evidence bearing on the possibility of draining the tubes by dilating and packing the uterus. While I believe it to be possible, I have never discovered any satisfactory proof of it. It is easy to be deceived into the belief that the pus comes from the tube, when in reality it comes from the uterus. Any experience on this point would be of interest.

Dr. Chase :—The question raised by Dr. Skene concerning the precaution to be taken in the cervix, is perfectly proper. It has been my custom always to cleanse the cervix as thoroughly as possible, first by an injection and perhaps a dull curette, not destroying the integrity of the lining membrane of the cervix, but simply to remove any secretions. If there is an inflammatory or eroded condition of the lower portion of the cervix, which oftentimes obtains, then there can be no question concerning the necessity of curetting before using the dilator.

I do not think Dr. Skene quite understood me in the successive steps in the dilatation. In the dilating I prefer some instrument which expands laterally, rather than the crowding into the uterine canal of a circular tube or sound, on account of the difficulty of making counter-pressure. If such counter-pressure is not made the tenaculum is likely to tear out and lacerate the cervix. After having dilated to a certain degree it is my custom to allow the blades to close together and withdraw them and use an antiseptic douche.

Regarding the question of the best material for injection after curetting, I would say that never, except in a few instances where there was positive signs of septic trouble, have I used anything but a solution of carbolic acid. I think if any strong solution of bichloride or biniodide is used in the uterine cavity there should be a thorough cleansing by sterilized water to wash away the chloride and prevent its producing mercurial poisoning. I have seen poisoning when that was not done. I am very much gratified that by recent observers carbolic acid is regarded as satisfactory and is regaining its lost position.

Regarding the question of the sharp or dull curette, it seems to me that it will not be often claimed that more force will be required in removing all the diseased tissue which it is necessary to remove from the uterine cavity than can be done by the dull curette. I confess some doubts and misgivings as to the use of the sharp curette, when the walls of the uterus are thin, and while I have used it occasionally, I have been quite satisfied with the results from the dull curette, and we have the assurance, I believe, that it can be used with less risk of injury.

Again the question of danger of curetting the uterine cavity, in the presence of pus tubes, is a matter which should always be taken into consideration. The diagnosis of pus or other accumulation in the tubes is sometimes difficult and sometimes easy. In the removal of diseased tubes a conservative preliminary procedure of curetting and packing the uterus must not be neglected. If in a given case of chronic corporeal endometritis there is septic material in a patulous tube the case is a good one to let alone, unless the risk of infection from such a source is precluded by a previous removal of such diseased tubes.

The case alluded to by Dr. Jewett of hydrorrhœa, in which repeated curettings had been done, and which finally developed malignant disease, is one of interest. I would like to inquire of Dr. Jewett the length of time from the first application of the curette to the time of the diagnosis that malignant disease was present?

Dr. Jewett:—Three years and a half, but the disease was there before.

Dr. Chase:—It seems to me that inferentially it is highly probable that when that uterus was first curetted there was no malignant disease there, because the history of malignant disease usually requires less time to develop. If Dr. Jewett failed to find it, I think it is safe to assume there was no malignant disease at that time, but it developed afterward. I do not know that we can infer that there was any relation between the curettement and the malignant disease, and I did not so understand Dr. Jewett. The greater interest seems to be the relation between the hydrorrhœa and the development of cancer.

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SOME REMARKS ON BALDNESS (ALOPECIA).

By James MacFarlain Winfield, M.D.,

Attending Dermatologist to the Kings County Hospital and the Long Island College Hospital,
O. D. P. Assistant to the Chair of Skin Disease at the Long Island College Hospital etc., etc.

Read at the annual meeting of Medical Society of the County of Ulster. May 31, 1893.

Although baldness, or more properly Alopecia, is of very common occurrence, and a disease productive of a great amount of annoyance, yet, when the physician is consulted, he seldom gives the patient the same amount of attention that he would if they were suffering from some other cutaneous disorder. He undoubtedly considers it too trivial, or else he does not care to undertake the relief of a deformity, as such an effort must take a relatively long time to produce any apparent good results. Consequently, the majority of sufferers are relegated to the care of the barbers, hair dressers, etc., people who are ignorant of the first laws of health governing the hair and scalp, and of course know less regarding diseases of the same. This inattention of physicians, and the consequent bungling and deleterious methods of so-called "Tonsorial Artists," aggravate the already pathological state and often produce a condition of baldness long before it would naturally be expected How often we see people, with young, active and healthy skins, who have lost a great amount of hair prematurely. The causes and diseases which predispose to baldness, are various. Brief reference will be made to some of the most important forms of alopecia, and we shall endeavor to deduce some facts, which might lead to some definite results regarding treatment. Complete congenital absence of hair is a very unusual condition. We frequently see children born with a scanty crop of hair which with time becomes fairly luxuriant. When there is complete alopecia at birth, the disease is due to arrested development of the pilary system, the microscope showing a deficiency of hair follicles. The prognosis is fair, the hair will grow in time. although it is apt to be thin and fine. The treatment is wholly exertnal stimulation.

Baldness is not, strictly speaking, senile unless it occurs in a subject at least fifty years of age. Men are more frequently affected by loss of hair in old age than women. Many theories are advanced to explain this. Some attribute senile baldness in men to the wearing of hard, stiff hats which press on the blood-vessels and nerves, and which also prevents the proper access of air to, and the ventilation of the scalp. It has frequently been noted that men who go without head covering are seldom, if ever bald. The lightness and peculiar formation of women's head dress, coupled with a thicker scalp and more abundant fat supply, probably explain why women are so seldom affected. Alopecia senile is incurable, hence treatment is useless.

The most important variety of baldness is the premature. Important, because it occurs irrespective of age, and it is for this, that we are most frequently consulted. Its origin may be idiopathic, from hereditary tendencies, or it may depend on a morbid constitutional condition, and often the cause is local. Complete alopecia following an attack of fever, such as typhoid, scarlet, etc., is usually of short duration, and simple general tonic and external stimulation is all that is required to produce a speedy aud permanent cure.

Fournier [1] thinks, that all debilitating influences may give rise to alopecia, such as excessive work, more particularly intellectual, sexual excesses, over-indulgence at the table, etc. He thinks, however, that excessive intellectual work is less liable to produce baldness than the other forms of excesses. Without doubt the principal cause of premature baldness is local disease of the scalp. Geo. T. Elliot, M. D.,[2] in a paper read before the American Dermatological Association, 1892, gives an analysis of two hundred and thirty-four (234) cases of baldness. All of the patients were taken from private practice. The sexes were almost equally divided, 111 being males and 123 females. Two hundred and seven (207) of the 234 cases were bald from purely local causes, showing pretty conclusively that scalp disease is the most frequent factor. Of local disorders, eczema seborrhoicum seems to be the most frequent, the treatment, and cure of which will, in most all cases, prevent an early loss of the hair.

The pathology of this local seborrhœa is uncertain, but it has been demonstrated by Unna that some micro-organism plays an important part in its production. Here again heredity comes in for its share of recognition. Patients often presenting themselves with dirty seborrhœic scalps, frequently apologize for the condition by saying "that it seems to run in the family"; for either one or both parents have had, or still have a similar scalp disease. It is doubtful if heredity has anything to do with its origin, but it is more probably parasitic, for, on inquiry, it is generally found that the majority of these people are careless about the use of combs and brushes, that is, a whole family using them indiscriminately.

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[1] La médecine moderne, Paris, Dec. 11, 1890.

[2] New York Medical Journal, New York, Feb. 4, 1893.

Dr. Elliot in the article above referred to pays special attention to this point, citing instances where both the parents and children suffered from the same disease, eczema seborrhoicum, and further says "frequent observation of such associations would naturally suggest the possibility of contagion";—some years ago Lassar claimed to have demonstrated that pityriasis capitis and alopecia pityrodes were contagious. When the bald condition is acute the prognosis is good, but if the disease has become chronic the outlook is not bright. The treatment of this form of premature baldness is comparatively easy, that is, when the predisposing cause is once discovered. If the patient is under tone and the cutaneous glands are not acting properly, the first indication is to administer tonics such as strychnine and cod liver oil, etc. Local treatment should be slightly stimulating and anti-parasitic; lotions containing salicylic acid or resorcine producing the best results. Preventive treatment should be instituted in all possible cases, and instructions given prohibiting the indiscriminate use of combs and brushes by all members of the family or the public brushes and combs of the barber. People who are predisposed to dandruff should, if possible, avoid occupations where there is much dust. The hair must not be allowed to remain damp after washing, and care be taken, to have the scalp thoroughly dried, and a brisk reaction instituted, by active stimulation from friction.

Physicians are frequently called upon to prescribe for attacks of sudden baldness, alopecia areata. When it occurs, as it so frequently does in young people, it produces a considerable amount of both mental disquiet, and we are stimulated to exert our best efforts to effect a rapid cure and also to disguise the deformity.

Radcliffe Crocker[1] in his work on diseases of the skin gives the latest literature on the subject of alopecia areata. The etiology and the pathology of this disease have undergone considerable modification during the last few years. It was formerly considered that all cases of sudden alopecia were of neurotic origin, but with the light thrown on the subject by such eminent observers, as Thin, Gruby, Robinson, etc., we find there are tropho-neurotic and parasitic forms of baldness, mixed up under the one title of alopecia areata. It is quite common to see attacks of baldness following neuritis involving nerves of the scalp, the "alopecia localis seu neuritica" of Crocker. In these cases, as well as in those following injuries to nerves, there can be but little doubt regarding their neurotic origin. But true alopecia areata, which forms about ninety-five per cent. of all csses where there is complete denudation of circumscribed spots, may, according to the recent investigations, properly be classified among the parasitic affections, and as Crocker suggests, the old name tinea decalvans might safely be revived. The exact parasite has not yet been demonstrated. In 1843 Gruby described a fungus which he calls tinea Audouini; whilst Thin and Robison ascribe the disease to a micrococcus But the various observers do not agree as to its morphological character. Hutchinson and Crocker are of the opinion that alopecia areata and tinea tonsurans are related. It is observed that in countries where ring worm is prevalent there is also a great amount of alopecia areata. Sufficient has been said to give an idea of the prevailing opinion and to point to means for treatment. Internal remedies have little or no effect, except it be to brace up a patient in need of tonics. The only internal remedy worthy of trial is jaborandi, or better still its alkaloid pilocarpine, hypedermically injected into the scalp in doses just sufficient to produce local sweating ($^1/_{30}$ gr.) This drug has a well known effect on the growth of the hair, and it appears to produce beneficial effects in some cases. The local remedies should be both stimulating and anti-parasitic. The first in line of usefulness is ichthyol in a twenty-five per cent. ointment. It is a mistaken idea to produce vesiculation in the early stage of the disease, it being better to begin with mild parasiticides. After thorough trial with mild measures, the strong stimulants can be employed, such as a saturated solution of salicylic acid, painting the spot with pure carbolic acid, etc. The indiscriminate use of chrysarobin is to be condemned, unless the physician applies it himself, because of the intense erythema this drug so frequently produces. Although this erysipelatous-like condition is harmless, still the amount of discomfort to the patient is sufficient to warrant the employment of other drugs which act more pleasantly.

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[1] Diseases of the skin. Blakiston, Phila., 1893.

There is one more form of baldness which we frequently see, more particularly in children, namely that which is produced by the tinea favosa (Achorion Schoenleinii) and the tinea trichophytina. These diseases are readily diagnosticated. Favus is not nearly as common as ring worm. The sulphur-yellow cup-shaped scutula are readily recognized. The disease is contagious and is frequently contracted from favosed animals, such as dogs, cats, mice, etc, Dr. Sherwell[1] reports a number of cases where the medium of contagion was a sick mouse that some children nursed. The disease is apt to become chronic if energetic measures are not employed at once.

Ringworm of the scalp (tinea tonsurans) is so frequently seen that the diagnosis is comparatively easy. The treatment of both favus and ringworm of the scalp is by anti-parasitics. In undertaking a cure it must be remembered that while tinea on the body is easily gotten rid of by simple remedies, that on the scalp often will require a long tedious trial before a curative result is obtained. The treatment is, after the scales have been removed by thorough oiling and washing, to cut the hair short and then to epilate as completely as possible. After which apply a parasiticide; a ten per cent. oleate of mercury is probably the most effectual. All persons affected with these diseases should be isolated and be made to wear caps lined with some anti-parasitic plaster. This rule should be particularly carried out where it occurs in public institutions such as orphan asylums.

The subject of baldness is of much more importance than we are apt to consider it to be, and it is hoped from this rapid review of some of the salient points, some profit may be derived and patients be benefited accordingly.

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LIQUOR AURI ARSENII ET HYDRARGYRI BROMIDI.

BY W. F. BARCLAY, M. D.

Pittsburgh, Pa.

Liquor auri arsenii et hydrargyri bromidi is an aqueous solution of gold, arsenic and mercury of a beautiful red color; it is acid in reaction and does not deposit.

The dose is ten to fifteen drops in half a wineglassful of water ter die. Ten drops is equivalent to one thirty-second of a grain of a grain of gold, one sixteenth of a grain of arsenic and one thirty-second of a grain of mercury salts. The dose can be increased to fifteen or twenty drops if desired. It agrees well with the stomach and does not produce purgation of the bowels. I may add that it regulates the bowels in obstinate constipation better than any medicines I have used for that purpose. It ptyalizes quickly if given in large doses. The gums become red, the teeth sensitive, but there is little detachment of the gums or increased flow of saliva.

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[1] American Veterinary Review, Nov., 1822.

Where the action of such medicine is desired, I believe it will give better satisfaction than anything yet discovered. In sclerotic diseases my success with it has been most satisfactory. In arthritis deformans, in syphilitic disease in its various forms, in aphasia hemiplegica, in induration of the liver, in induration of the kidneys, in all sclerosed conditions, nothing could act more satisfactorily than this preparation has in my hands.

I wish to state that I will only report a few cases of certain forms of disease, hoping in the future to continue these studies and report cases that will indicate the truth of what I have stated.

Nothing could give me more pleasure than to show any reputable physician cases that I am now and have been treating. Iodide of potassium can be added to this preparation as it is not incompatible.

Mrs. F., age 18 years, had secondary syphilis; had syphilitic eruption, sore throat, enlarged cervical glands and ulcers in her mouth, on tongue and throat.

Prescribed liquor auri arsenii et hydrargyi bromidi, 10 gtts. ter die in water.

I gave no other medicine. Saw the patient once a week for a time and then every second week. At the end of three months I could see no evidence of syphilitic trouble. She had steadily gained in health and appearance. Her weight increased fifteen pounds. I directed her to continue medicine another month and then leave it off.

Miss J., age 23 years, had enlarged cervical glands; has had the trouble for several years. Slight trouble in apex of right lung with cough.

Prescribed liquor auri arsenii et hydrargyri bromidi, 10 gtts. ter die in water, also lanolin as an external application. No other treatment given. At the end of ten weeks she was entirely well.

Mr. G., age 36 years. Had enlarged inguinal gland on left side; it had suppurated and had been opened by another physician before. I saw him and it was still very much enlarged and discharging pus; had never had syphilis.

Prescribed liquor auri arsenii et hydrargyri bromidi, 10 gtts. ter die in water. No other medicine given. At the end of eight weeks he was discharged well.

Mr. R., age 30 years. Had secondary syphilis. Had been under care and treatment of another physician for three months. He was the worst case I ever saw.

I prescribed hydr. iodidi viridi. He seemed to get worse. I then prescribed Iodia with the addition of Potassii Iodidi in large doses. Then had Dr. E A. Wood in consultation who advised troches of Hydr. chloridi mit. compounded with Confection of Roses and Gum Arabic. This did no good. His mouth was so sore that he was obliged to live on milk ; could not take solid food.

Prescribed liquor auri arsenii et hydrargyri bromidi, 10 gtts. ter die. In two weeks there was great improvement. In three weeks he could eat solid food. In two months he insisted that he was well and wished to leave medicine off. I directed him to continue treatment for at least three or four months. I have met him from time to time and he seems entirely well.

Mr. O., age 22 years, had primary syphilis ; hard chancre with enlarged ingouinal glands.

Prescribed liquor auri arsenii et hydrargyri bromidi, 10 gtts. ter die in water. At the end of two months he had slight sore throat. No secondary rash. At the end of three months he was discharged with instruction to continue treatment at least another month and leave it off.

Mr. S., age 38 years, has secondary syphilis, sore throat, patches in his mouth, eruption over his body, ulcers about the anus, etc.

Prescribed liquor auri arsenii et hydrargyri bromidi, 10 gtts. ter die in water. The treatment was kept up for three months and he was discharged with directions to continue medicine for another month and leave it off.

I could report other cases treated in the same way and with the same results, but this is sufficient evidence for any who may care to give it a trial.

KINGS COUNTY MEDICAL ASSOCIATION.

At the January meeting, Dr. D. F. Lucas will read a paper entitled "Some Notes on Vegetable Alkaloids."

BROOKLYN NEUROLOGICAL SOCIETY.

The following officers have been elected for the ensuing year : President, T. L. Wells, M.D. ; Secretary, A. C. Brush, M.D. ; Librarian, C. F. Barber, M.D. The president and secretary were appointed a committee to select a new night for the meetings.

PNEUMONIA.

BY S. B. CHILDS, M. D.

Croupous pneumonia has during recent times been defined as "an infectious disease characterized by inflammation of the lungs and constitutional disturbance of varying intensity."

The recognition of an infection as a cause of this disease necessarily implies the existence of a specific germ, and as corollary we may state that this germ, like all germs, has a limited existence.

During the course of the inflammation three stages have been recognized—congestion, red hepatization, and gray hepatization. Now, on a physician being called to a case of this kind, the query is, what is the best thing to do in the way of medical treatment?

If one consults some of his associates he will find remedies recommended ad nauseam. One declares the fever does no harm, while another is not satisfied unless one of the chemical antipyretics keeps the temperature near the normal standard.

Varying results of course follow these different treatments.

Having for a long time accepted and practised the doctrine that many diseases can be modified and conducted to a safe issue by giving a remedy that will attack the diseased cell function, I have treated my cases of pneumonia in this way. The three remedies that I employ are aconite, bryonia and iodine. If I am called to see a patient during the first stage I give aconite and iodide of potassium, and on the development of the second stage I continue the iodide and also give bryonia. The aconite is given with a view of relieving the vaso-motor tension, and thereby equalizing the circulation; this, if doing nothing more, produces a measure of comfort. The last two remedies are given for their local effect. Now as to the dose: in a half goblet of water I put ten drops of tincture of aconite, and in another goblet containing same quantity of water I put five grains of iodide of potassium, and give a teaspoonful alternately every hour.

As soon as the second stage comes on I substitute five drops of tincture of bryonia for the aconite and continue to give in alternation with the iodide. If the heart becomes weak give one fourth of a grain of extract of nux vomica every three or four hours. If the patient has much pain hot applications are used. This with suitable food constitutes a treatment that bears excellent results. The physician who believes in giving large doses of quinine, ammonia, etc., will sneer at these small doses and hotly declare that nature cures independently of the drugs. In view of this declaration there is a compliment paid to vis medicatrix naturæ that the writer recognizes, and to have such an ally is certainly a desirable help. Those who have faith in heroic dosage are not always mindful of this fact, nor yet of the condition which obtains under their hands, and that is a state of drug disturbance plus the disease.

Nature here is hindered, not assisted.

THE DISCREPANCY BETWEEN SYMPTOMS AND LESIONS OF THE NOSE AND THROAT.

BY JONATHAN WRIGHT, M. D.

An address delivered before the Post-Graduate Medical School of Chicago, June 20th, 1893.

Mr. Ruskin says that "the moment a man can really do his work he becomes speechless, all words become idle to him,—all theories;" but it is only those subjects which lie on the border line between well-established fact and pure hypothesis, of which it is interesting to talk or to hear. There must of course be enough acknowledged truth in them to gain our respect, but also enough novelty to attract our curiosity.

In the thirty odd years of laryngoscopic history which lie behind us, the most obvious and suggestive subjects have been, except in minute details, so thoroughly treated that we have almost arrived at that exceedingly pessimistic and discouraging point where, *a priori*, we exclaim on hearing a paper, "the truth in it is old, the novelty is false."

Goethe's aphorism "Es irrt der Mensch so lang er strebt," should make us more charitable and more patient.

Fortunately medicine is such an inexact science that in all fields, the aftermath yields as abundant a harvest to the gleaners as to the reapers.

Although the old story of the Latin professor who, having devoted a long life to the study of the third declension, regretted on his deathbed that he had not confined himself to the dative case, is quoted in defence as well as in derision of specialism, there is ground, unfortunately, for the criticism that special work frequently rests on too narrow a basis. When the seat of disease lies beyond the direct appreciation of the five senses it calls for perhaps a wider scope for the mental processes; but they never have that exactitude of knowledge for their result which is the boast of modern medicine. The more certain, the more evident, the more definite our knowledge, the narrower it is in essentials; but the evidence of the senses imposes frequently upon the vigor of the understanding, if it curbs the flight of the imagination.

A tubercular ulcer of the larynx seen in the laryngoscope may lead the laryngologist to forget for the moment there is lower down a similar condition in the pulmonary parenchyma, but dullness at the apices and bronchial breathing is quite as apt to cause the general practitioner to overlook the fact that the huskiness of the voice and the sore throat are precursors of very much more agony to the patient than the pulmonary signs. Both the laryngologist and the general practitioner are too apt to forget that unknown chemico-biological change which had taken place before the bacillus began to grow. Common sense is the goddess before whose shrine the Anglo-Saxon race loves to do homage. Carlyle in defining "Genius" unconsciously worships it as "Capable of seeing with his eyes, and incapable of not believing what he sees."

It has seemed to me that we have applied this saying rather to the literature, than to the practical observation of the diseases of the nose and throat. What we see in print has made us somewhat unable to believe what we see in the nose and throat. Rare and exceptional cases are reported and, receiving undue prominence, lead us astray in establishing the relation between cause and effect. This has lead to much futile if not harmful therapeutics in the nose and throat, just as formerly ignorance of laryngological technique led to much negligence and inactivity. Although in this instance the sins of omission greatly outweighed our sins of commission, it behooves us today to consider a little more carefully what we are justified in attacking in the nose and throat, and what we had better leave alone. The reaction which has lately set in against intra-nasal surgery bids fair to soon go too far, and it must be remembered that what I have to say is not directed against thorough and vigorous intra-nasal operations where indicated, but rather, against the disposition of laryngologists to exclude from their considerations other than purely local abnormalities and irregularities.

Where it is a question of life and death, even remotely, we have no difficulty in judging. Where it is merely a question of a more or less comfortable life, and no question of death at all, I am sure many persons who have had wide experience will join with me in frankly admitting, frequent perplexity of mind. This may be simplified into the form of a question, "Is it worth while? Is the severity of the operation commensurate with the results? Is the length and inconvenience of the treatment going to be fully repaid by the increase in the comfort of the patient?" I am of course assuming, and I hope it is not gratuitous assumption, that we have in view not our own bank accounts, but the welfare of our patients.

To properly approach the problem stated above, we must consider the bearing of the patient's nervous system, and his intelligence on the subjective symptoms from which he seeks relief. If Lombroso and others have not succeeded in *proving* that Genius is akin to insanity, no one accustomed to study man psychologically as well as physically, can doubt that there is well established ground at least for the inference. Evolution of the human brain has produced a plant whose topmost shoots are themselves frequently barren. Nervous energy properly regulated in one generation, in the next often beats out its life against the bars of a mad-house. The more complicated a machine, the more parts there are to get out of order. Mental powers that could create the visions of Shakespeare or Swedenborg, may expend themselves in forebodings caused by the tickling of a long uvula. The stolidity with which savages bear horrible wounds, is due not so much to the fortitude as to the stupidity of their souls. And yet we have stolid people with, as well as without sense, and nervous people whose mental powers are reduced to a minimum.

Now what constitutes symptoms? A symptom is an indication of disease. Who can tell with microscope or test tube, where health leaves off, and where disease begins? What shall we call a subjective symptom, and what a physical sensation or peculiarity? These are questions of great practical importance in a large number of cases that apply to the laryngologist for relief from annoyances, whether real but trifling, or imaginary but serious to the patient. They must at present remain unanswered, because they are unanswerable in the present state of medical knowledge. Who can venture to predict as science advances, how much in the future will be added to the category of symptoms, and taken from the category of sensations?

After these introductory remarks the application of the general principles to special conditions must be more illustrative than complete.

Nasal obstruction has been rightly insisted upon as the source of many ills of the lower air tract, with which man is afflicted. We all know what a train of symptoms frequently follows such a condition. When such obstruction exists, and when such results depend upon it, our duty is clear. It is not the object of my paper to speak of the details of the treatment of such cases.

I see a great many cases of extreme deviation and thickening of the septum—I don't mean slight, for we all have slight irregularities,—but deviations and thickenings of the septum to such an extent that more or less complete stenosis exists on one side or the other and the patient has lived a long life with no symptoms referable to it either directly or indirectly. Not long ago an old woman came to me for a slight sore throat declaring she had never had anything the matter with her nose or throat before. She had an ordinary acute catarrhal pharyngitis. On looking, as a matter of routine, into the nose I saw on each side a large pendulous mass which proved to be the baggy ends of the middle turbinated bodies, tremendously hypertrophied and certainly occluding half the breathway on each side. I wanted them for my pathological collection, but I didn't get them. The old lady repelled with scorn and incredulity the insinuation that there was anything the matter with her nose, although by holding up the end of it she could herself have seen the pathological conditions in a mirror. I saw another case without symptoms where the obstruction was more complete yesterday. To-day a man comes to me with complaint of unilateral nasal obstruction, eustachian deafness, post-nasal dropping, pain, etc., etc. I look into the nose and find a very moderate deviation and thickening of the septum on one side, and a large swelling of the inferior turbinate on the other side to fill the concavity. Masterly inactivity in yesterday's case, and a vigorous use of trephine, saw and cautery, or possibly simple spraying in to-day's case will result in a continuation of comfort in one and a restoration to comfort in the other. Both patients are satisfied, but my curiosity is not, and I am forced irresistibly to the conclusion that the nasal obstruction in to-day's case was only one factor in the etiology, although removal of that factor cured the condition; otherwise how am I to account for yesterday's case?

There is still another set of cases which I occasionally see. A patient insists that he does not breathe as he should through his nose, that one side or the other is completely stopped most of the time, but that neither side is ever freely open. Examination shows nothing abnormal. We say this is a case of vaso-motor excitability. He insists, however, that air does not pass properly now; apparently there is ample room, sometimes so wide we can see the post-pharyngeal wall. Not infrequently patients who have suffered from atrophic rhinitis and have an abnormally wide passage, complain of nasal obstruction even when the nose is free of crusts. On having them try nasal respiration in your presence they are usually a little puzzled and doubtful about their sensations. As far as I know there is nothing so deceptive in nasal symptomatology as the patients' statements in regard to how much or how little air passes through their nostrils. Stupid patients, or better perhaps to say, stolid patients often state they have never noticed any nasal obstruction, when examination and testing the nasal respiration make it very evident that there must be insufficient room. These cases are not so troublesome, because they do not insist that something must be done, and if an operation is advisable there is something tangible to work on. But with the others, those whose nasal passages are wide and free and yet complain of stoppage, one is frequently at a loss what to do.

These are cases of subjective nasal obstruction. They get plenty of air, but they don't think so. They have no sequelæ which they mention without suggestion. Many times I feel justified in cauterizing the inferior turbinate or removing any small spur so that they will have still more air pass and they seem to be particularly gratified with the results. I am convinced that those cases are due to the popular diffusion of rhinological misinformation through gossip and the daily press. Argument with those people is usually of no avail; they know what they feel and their confidence in your powers of of observation is shaken when you don't find something to burn or cut, as they have heard from loquacious friends the exaggerated symptoms and the relief afforded from them by such procedures.

Recently I operated to straighten a deviated septum in a boy eighteen or nineteen with complete unilateral obstruction. He had suffered great inconvenience from it since childhood. The concave side was roomy, and the patient said he could always breathe through it with ease. The turbinated bodies on that side behind and in front left ample room for respiration. After straightening the septum a thick walled rubber drainage tube in the formerly occluded nostil held the septum in place for three weeks, when it was dispensed with. The septum was straight and he breathed freely for the first time through both nostrils. Three days later he returned in some perturbation of mind, saying that now the formerly free nostril was occluded. An examination with the post nasal mirror showed very marked vaso-motor distension of the posterior ends of both turbinates on that side. Nature which had previously left that side wide open for the convenience of the patient, was now seeking an equilibrium. There may have been a change in the amount of rarefaction of the intra-nasal air on that side due to the decrease in the space from straightening the concavity of the septum, but he breathed freely through that side for the first three weeks during which the septum was straight and the opposite nostril occluded by the drainage tube. He was told to "wait a while."

It is a common thing to have a patient say that he cannot breathe well through one side, but perfectly through the other side of his nose. You remove the obstructing spur. The patient breathes freely through that side, but he very soon says that he does not breathe so well through the formerly open side. No physical change is appreciable in the non-operated side. We have, I believe, in such cases a subjective sensation of unilateral nasal obstruction arising from comparison, which is more apparent because of the sudden change.

A good many other cases who complain of unilateral occlusion doubtless are to be explained in a similar manner. While in a nervous impressible frame of mind they accidentally discover that more air goes through one side than the other. The mischief is done. A loquacious friend with personal intra-nasal experience, the fame of a rhinologist—we all know the old story.

What are we to learn from these cases? I am now speaking only of the symptom of nasal obstruction, either real or imaginary, but without other symptoms depending on it. I believe we are justified in removing the obstruction when we can do so without injury or danger to the patient, whether we think he really gets enough air through that side or not. When, however, unilateral nasal obstruction exists without subjective or objective symptoms, no matter how complete, leave it alone,—you pass hundreds of them every day in the streets, unconscious and happy.

Considerable atrophy of the mucous membrane may be present with no symptoms. This is especially noticeable in people past fifty. The nasal fossæ at this time are nearly always very much more roomy than at an earlier period We may call it the atrophy of age, or in some cases it is evident from the history, that the condition is the result of an active atrophic process which although giving symptoms in early life has "ceased from troubling." It is not uncommon in dispensary patients to see hypertrophic disease combined with atrophy, and considerable intra-nasal distortion giving rise to no subjective symptom which we can elicit from the patients' statements. A malignant growth in the nose has almost always attained considerable size before the patient notices it. The slower the growth, the greater the extent of it before the symptoms drive the patient to his doctor. The length of the subjective symptoms is no criterion of the length of time that has elapsed since the growth actually began.

Neuralgias of nasal origin are frequent. Usually there are gross and easily recognizable intra-nasal lesions to account for them. Occasionally however, the intra-nasal change is so slight that it is difficult to imagine why the pain should exist in that particular case, while in many others more marked it is not present. More frequently in such cases we have to fall back on the general system, and distant organs for contributory or principal causes. In making this statement I have in mind two cases as illustrative of a host of others.

A young man came to one of my clinics, complaining of pain of long standing under his left eye, radiating to the root of his nose and to the back of his neck, frequently most severe in the latter locality. He was a newsboy, and seemed anything but neurotic. I placed him unhesitatingly in the stolid category. Examination of the nose revealed a fairly healthy mucous membrane, but both middle turbinates seemed a little displaced upward and inward toward the septum, only very lightly impinging on it. The anterior extremities seemed slightly redder, and slightly more prominent than normal, especially the left. Pressure on the left with a probe increased the pain. So did pressure externally over the infra-orbital foramen. Cocaine only abolished the local tenderness, he was uncertain about any effect on the pain itself. I examined most minutely into his general health, I had his eyes carefully examined. Absolutely no cause was found outside of the nose. After keeping him under observation for some time, I cauterized the anterior end of the left middle turbinate. After several repititions, the neuralgic pain ceased on that side, but he began to have it on the other side, not so severely, and not so constantly. The middle turbinate on that side was also lightly cauterized several times. I may say in passing that I am unable to satisfactorily explain the rationale of the action of the cautery in these cases. It may destroy the ends of the sensitive nerves, it may restrict the blood supply, or—most mysterious of expressions—it may act as a counter-irritant. Whether any or all of these suggestions may be true, it certainly seems to give in many cases temporary, and in some cases permanent relief. The young man's pains finally all sunk into insignificance. I presumed he had had a slight periostitis of the middle turbinate, as there was evidently some hypertrophic rhinitis. About this time he contracted a venereal sore. His consternation became for a time a regular syphilophobia, although the sore was pronounced chancroidal, and he was assured he had nothing to fear if he was virtuous in the future. His disposition to become so mentally preoccupied with an accident, which as a rule only excites a languid interest in his station of life, led me to believe that probably the neuralgia for which he had been treated was not of a character which brings stolid people to see their doctor.

The other case was a neurotic young married woman. She had been suffering with one-sided facial neuralgia for some time, which was greatly increased by a slight cold she had acquired. Drugs and electricity had given her no relief. I suggested that a little cocaine should be applied to the middle turbinates on that side. To the great surprise of her family physician, and to the patient's delight, the pain was entirely relieved for several hours. This was repeated several times, each time with a little less marked improvement. As the coryza got well, the pain grew less, but did not disappear. She complained of the pain radiating into her scalp and the roots of her hair. When she was well enough her physician brought her to my office. On examination some deviation of the septum toward the right, and some "vaso-motor" hypertrophy of the inferior turbinates was apparent. Otherwise, her nose and throat seemed perfectly normal. Pressure on the inferior turbinates had no effect. Pressure on the apparently perfectly healthy middle turbinate on the affected side, (left) caused "terrible pain," she said. Cocaine applied to this locality completely relieved the pain and tenderness. The mucous membrane was lightly cauterized. The pain ceased almost immediately on that side, but after a few days she complained that the pain was just as bad on the other side. A tender spot being elicited over that middle turbinate, the cautery was again used giving her relief for several days. Then she complained of pain on both sides, and indeed "all over her head," she said. I then ascertained from her family physician, that her stomach and bowels were in a bad way. Late champagne suppers had rendered the former fit only for peptonized milk, while the latter were constantly loaded with fœcal matter. She had never born children, but was anxious to do so. Her uterus was found displaced, and she had endometritis and endocervicitis. She was irritable and disposed to make life a burden to herself, but especially to her husband, her nurse and her doctors. She failed to carry out any systematic plan of treatment. Her stomach and bowels had only time to recover slightly from abuse, when she surprised them with fresh novelties in the gastronomic way. Gentlemen, cauterization of that woman's middle turbinates was bad practice. If she had no nose the neuralgia would have selected some other organ. To describe the proper treatment for that case would lead us into other fields of medicine, and far back into domestic sociology, but you will recognize the type, if you are candid with yourselves, as one in which you have not infrequently been led astray in diagnosis and treatment.

There is another class of cases, seen especially in our free, our over-generous dispensaries. I may call them cases of pure and simple "nasal hysteria." This condition is common enough in patients who have been under treatment, especially operative. The following case will serve as an illustration. A girl of 16 complained of post-nasal dropping. She was neurotic and of limited mental capacity; a moderate amount of lymphoid tissue was seen in the vault and on the posterior wall of the naso-pharynx which had undergone partial atrophy. There was no intra-nasal lesion recognizable, and the nasal fossæ were amply wide. She did not then complain of nasal obstruction. The lymphoid tissue was throughly removed so that the surface was smooth, requiring repeated visits for this purpose, and to reduce the resulting inflammation. The post-nasal dropping gradually diminished, but she began to say that she could not breathe through her nose at night and finally insisted that this was so distressing that she had to sit up most of the night. There was no apparent change in the nasal mucosa. Her visits were persistent and the details of her suffering were harrowing. Finally one inferior turbinated body was cauterized. At her next visit she said she could breathe much better through that side. Examination showed almost total occlusion of that side as the result of the inflammation following the cauterization, the slough and the congestion. On testing, it was evident that very little air passed through that side. When this condition cleared up and the mucous membrane began to assume its normal appearance and the fossa its normal calibre, she said that now both sides were just as bad as before the operation. Her further attendance was discouraged. The "nasal operation habit" is not infrequent and in the dispensaries is often an exasperating incident in the day's work. I have had patients, especially women, beg, almost tearfully, to have their nose "cauterized again," and the number of nasal systoms that may be evolved by a too close study of corporeal sensation in the neighborhood of the nose, is truly wonderful. I have heard that the same thing is true of the uterus. This is, *par excellence*, the class which furnishes the miraculous histories of rehabilitation wrought by the mind cure and the faith cure and their allied sciences, Christian and Homœpathic. These cases furnish many of "the queer things we see and the queer things we hear" even in legitimate medicine.

There are a number of cases reported, of parosmia, due to no apparent intra-nasal lesion. I have myself seen no marked case of it, though I have seen a few cases where it existed to a slight degree. Those recently reported by Dr. Knott in the Medical Press are rather curious. They were all men. The first case fancied that he exhaled a terrible smell which drove people from his presence, caused them to cough and sneeze and even nauseated horses. We may conclude that the mental impression of a smell is pretty vivid when it is thought "to make a horse sick." This case was cured by hypnotism.

Whether he subsequently took up with some other crazy notion or not was not known. It is quite possible that his misguided nervous energy was subsequently expended in a rational manner on the necessary occupations of life. In another case these attacks of parosmia bore some relation to paroxysms of gout from which the patient suffered. The cases well known to rhinologists, where the smell of a rose excites paroxysms of sneezing or of asthma, are somewhat invalidated from a materialistic point of view by the case where the sight of an artificial rose produced the same phenomenon in a patient who thought it real. The sycophancy referred to in the old saying is familiar to you, where the man always sneezes when his patron takes snuff. Once, when Goethe sat at Schiller's writing desk during the latter's absence, he was almost overpowered by a most oppressive odor. He then discovered that Schiller could not write except he had about him the smell of rotten apples. He kept a drawer in his desk filled with them. Champagne and tobacco were also spurs to his Pegasus. All these things repelled Goethe's Muse.

All these cases and all such anecdotes are merely illustrative of the wavering line between mind and matter in nasal symptomatology, some on one side of it, some on the other, but in practice the bulk of the cases have a little of both. It requires all our mental acumen in many cases to say which predominates; and this mental query arises not from the theoretical vaporings of minds uncertain of themselves, the antipodes of Carlyle's definition of Genius but the striving of honest endeavor after the unknown, perhaps the unknowable, but none the less important in conscientious therapy on that account.

It has seemed to me that the signs of intermittent nasal obstruction, so often seen with dyspepsia, and which is commonly referred to that delightfully convenient, because so difficult to refute, theory of reflex action, are frequently in large part due to the general nervous irritability caused by a defective digestion. A similar amount of vaso-motor change doubtless passes unnoticed by the placid man whose mind is at peace with himself and all the world. A dear old gentlemen who had long been relieved of the condition he so graphically described, once said to me: "When I was a young man I had dyspepsia so badly that it made me mad to see a fly crawl."

I have reason to think that in the last ten years many a septal spur and many a turbinated body has fallen a victim to the irritable temper of a dyspeptic and the injudicious specialism of the intranasal operator.

I do not mean here to speak of the nose as the origin of various reflexes, nor do I wish to go any further into a discussion of the areas of hyperæsthesia. Possibly the striking peculiarity of the phenomena has given these cases a more extended notice than their importance and their rarity merits. General nervous irritability, dyspepsia, gout, rheumatism and melancholia are all efficient causes of nasal symptoms, but it is much more common to see these remote causes combined with abnormal local conditions than it is to see them the sole cause. The practical point is that the ability and common sense of the rhinologist must be used in the differentiation of one cause from the other, assigning to each its proper significance, and acting accordingly.

The hypertrophy of the lymphoid layer of the mucous membrane in the fauces, and post-nasal space exceeds in frequency by ten to one all other affections of the nose and throat in children. I have sometimes thought that this preponderance of post-nasal trouble is partly due to the inability or disinclination of infants to remove secretions when excessive, by hawking, clearing the throat or blowing the nose. All the nasal structures and the accessory sinuses drain into the naso-pharynx. An adult is never satisfied as long as the vault of his pharnyx is filled with mucopus. Until a child is taught to blow his nose and learns to clear his throat, every inflammation must cause an accumulation in the naso-pharynx which acts as an irritant. The median and lateral folds of the pharyngeal tonsil with their intervening recesses exist in children normally, and have disappeared before adult life. As a rule, the younger the child the more marked are these folds. Histologically we see that the prominence of these folds is due chiefly to the thickness of the layer of round cells, the lymphoid or adenoid layer of the pharyngeal mucous membrane. We have every reason to believe that acute and chronic inflammations by increasing the congestion of the part and causing an exudation of round cells from the vessels, is the cause of the increase in the bulk of the pharyngeal tonsil, lymphoid hypertrophy or adenoid. When the congestion subsides the round cells are not all of them reabsorbed, each fresh "cold" adds to the trouble, and the adenoids are themselves the predisposing cause of the "colds."

Practically every child under six has in this latitude suffered from many colds. Clinical observation and histological examinations of post mortem specimens from the naso-pharynx of infants have convinced me that a very much larger proportion of children have a considerable lymphoid overgrowth in the naso-pharynx, than present any post-nasal symptoms. The amount of lymphoid hypertrophy often bears no relation to the degree of apparent stenosis. It will, of course, be readily understood that a small narrow pharyngeal vault requires less tissue to obstruct it, not only absolutely but relatively. I have frequently detected with the finger considerable lymphoid overgrowth in the vault of children who presented no symptoms traceable to its presence. I have quite as frequently been surprised to find a hardly perceptible amount accompany mouth breathing, cold catching, cough and dripping. These cases improve after scratching thoroughly the surface with the finger nail to break up the blood supply and cause the production of contracting cicatricial tissue—nature's method of patching up a mucous membrane after puberty. Now we cannot explain this difference in symptoms by the supposed exaggerated action of the mind, children rarely have any thought of physical sensations not amounting to pain and discomfort, because they have no morbid forebodings, but just as the temperament of adults varies between wide limits, as has been emphasized, so the local susceptibility of mucous membranes, in both adults and children, to become irritated, to become the seat of disagreeable sensations, and to secrete an abnormal amount of mucus. varies to a very appreciable degree. In one case a very moderate hypertrophy, by being more or less gorged with blood and by active secretion, may produce even stenosis, which a similar amount of tissue in a more tolerant membrane does not cause. Cold catching, cough, eustachian deafness and middle ear suppuration, of course depend not chiefly on the amount of tissue present, as they are quite as frequent and quite as marked in slight as in great hypertrophy. This same phenomenon is also observed in adults. Enlargement of the pharyngeal tonsil to a very marked degree is not infrequently observed beyond adolescence. Cohen reports having seen such a condition in a woman of seventy without symptoms. It is highly probable that these cases *did* suffer from noticeable symptoms in childhood, but not of sufficient severity to have brought them to the notice of a physician or to have left a memorable impression on the mind of the individual. I am not prepared to believe that either the lymphoid material in the fauces or in the pharynx begins to grow after adolescence, and I have never seen any evidence to warrant the belief that a previously hypertrophied condition perceptibly increases in volume after twenty-five. The tonsils may become more extensively diseased after adolescence. The crypts become larger, forming tortuous sinuses in which food may lodge and concretions form, giving rise to various symptoms referable to the tonsil, but it is not reasonable to suppose, and my clinical experience does not lead me to believe that lymphoid cells increase in number in any situation, except in active inflammation at a period of life when metabolic changes have reached an equilibrium, or have become retrogressive. If there really are any rare exceptions, they only prove the rule.

After puberty the vault of the pharynx enlarges in every direction, and makes it possible for the same amount of growth to exist while the symptoms previously due to it may subside; but as a matter of fact the growth too shrinks at this time.

A year or two ago a young man of twenty-one was sent to me by an ophthalmologist with the request to examine his nose for a cause of some insufficiency of the ocular muscles. Nothing was seen in the nose, but in the naso-pharynx, which was especially roomy, there was an overgrowth of lymphoid tissue as large as a pecan nut, but no amount of cross examination could elicit from the very intelligent patient any marked naso-pharyngeal symptoms, either in childhood or since. The growth was removed and there was the same failure to elicit any avowal of an increase in his personal comfort. One does not produce a favorable impression on a patient's mind when one operates under such circumstances.

While I believe that the undue amount of fibrous or cicatricial tissue left behind on the absorption of the lymphoid cells of "adenoids," and the damage done to the muciparous glands, are the chief pathological elements in that incurable complex of symptoms known as post-nasal catarrh, yet it is certain that in many cases cicatricial tissue gives rise to no symptoms. The bands of adhesion which stretch across the fossa of Rosenmüller are seen in many people who make no complaint. Doubtless this fibrous condition could be demonstrated microscopically in the substance of a mucous membrane which, notwithstanding its crippled condition, fulfils its function without troubling the patient.

When one comes to appreciate the multiplicity of the accidents to which the animal organism is subject, it becomes apparent that this latitude of structural endurance is a necessity for the preservation of the species. It is the only instance of a complicated and delicate mechanism which is able to endure abuse and mutilation. This attribute is quite as wonderful to the pathologist as the delicate adaptation of normal structure to function is to the anatomist.

It is very frequently the case that we see patients complaining of eustachian catarrh whose origin we are now accustomed to believe is always in the naso-pharynx, and yet in whom it is taxing our powers of ingenious discrimination to the utmost to detect any naso-pharyngeal lesion. We may believe, in these cases, in a previous condition of naso-pharyngeal inflammation which, after spreading to the eustachian tubes has subsided in the naso-pharynx, leaving behind no appreciable lesion. Here as elsewhere, however, we must be on our guard against being too much at a loss to account for symptoms. An amount of tinnitus aurium, of unilateral deafness, of post-nasal dropping that passes totally unnoticed in one person, drives another from office to office to seek relief from a malady which is not altogether naso-pharyngeal in its origin. It is certain that much of the improvement noted in some of these cases is due to a subsidence of nervous irritability rather than to an improvement in the local condition. The Autocrat of the Breakfast Table has recently said that the normal health line is an undulating one As the old negro hymn has it,

"Sometimes we're up
Sometimes we're down,
Oh, Lord,"

It is along the depression of the curve, and not on its crest, that we may look for the most aggravating symptoms in these cases.

Dr. Bosworth, I believe, has made the statement that naso-pharyngeal irritability is very frequently due to digestive disturbances, while nasal irritability never is. While this is too absolute a statement to accept in regard to the nose, it is, I believe, true that naso-pharyngeal irritability is the more common reflex.

It is a very common belief among the laity, and not a few of the profession, even laryngologists believe that post-nasal discharges are the cause of the indigestion which not infrequently accompanies them. I am disposed to think that in the majority of adult cases the stomach is the first offender. I don't know how to absolutely prove it, but I don't think much of the excessive mucous discharge made up of raw albumen finds its way to the stomach. Young children swallow their discharges during a cold, and in them we do not see sharp feverish attacks of gastro-enteritis, which is promply relieved by castor oil. Adults, however, do not swallow much of their mucus, unfortunately some of them get rid of it in a way more offensive to their fellow citizens than to their own stomachs. The crusade against public expectoration should include in its work, encouragement for the prevention and treatment of post-nasal catarrh.

As in the nose, I pass over those well known instances where the naso-pharynx is the starting point of various distant reflexes, remarking, however, that in these cases gross lesions are usually apparent, to account for areas of hyperæsthesia which in the nose are frequently unrecognizable by inspection.

When we come to the oro-pharynx we meet with a greater diversity of lesions without symptoms, and also a greater frequency for which we have no local explanation. We again note the perfection with which Nature adapts mutilated parts to function. In the active ravages of ulcerative syphilis we are often appalled at the extent of tissue distortion and destruction in the pharynx and soft palate. The vigorous use of iodide of potash usually suffices to prevent further extension, but many cases, even in private practice, are seen only after great damage has been done. In a short time after the ulcerations have healed, the insufficiency of the palate begins to be remedied. It soon adapts itself to the posterior pharyngeal wall in swallowing so that fluids pass no longer into the naso-pharynx.

Every rhinologist recognizes the "dead" voice of post-nasal "adenoids",—a voice deprived of resonance,—a voice which is perfectly distinct from the nasal voice (which may be called a voice with perverted resonance). Now this dead voice is not altogether one of obstruction. It is one in which the proper coördination of the palatal muscles has been interfered with either by mechanical obstruction or by a certain amount of paresis resulting from repeated attacks of pharyngeal inflammation. Neither is it the "thick" voice of faucial tonsil hypertrophy. This condition of muscular paresis was impressed upon me by my assuring a young lady that when she had the very large mass of lymphoid material removed from her naso-pharynx, her disagreeable voice would become more resonant. Although the vault of the pharynx was cleaned out thoroughly the change in the voice has only become perceptible after more than three years of freedom from post-nasal obstruction.

Now one would naturally expect that there would be very marked alteration of the voice in these cases of disfiguration of the soft palate. (Of course there is, where perforation exists or where the palate is too short to reach the posterior wall). But I have seen many cases of tertiary syphilis in which after cicatrization there was almost entire occlusion of the way between the oral and nasal pharynx caused by the adhesion of the soft palate to the post-pharyngeal wall, and in which, to my somewhat dull ear, no change in the voice was discoverable. In one case I remember the occlusion was so great that the patient could not blow his nose, though respiration through the small opening was possible. If the wave sounds were transmitted to the vault it was under greatly altered physical conditions, and the voice did not betray the lesion. There is an absence, frequently, of any other signs that we would expect with such a distortion.

With complete occlusion, very few of which I have ever seen, we of course get more marked signs.

A much more familiar sight is the presence in the throat of considerable enlargement of the faucial tonsils in persons who are totally oblivious of it, and who receive with coldness not unmixed with distrust any suggestion looking toward operative procedures. We know how frequently many of these cases have sore throats, but some do not even have that indication of large tonsils. You may say these people are not observant, but this will not explain it A quinzy every winter is enough to arouse the interest and attract the attention of a marble statue. Again, we must suppose in these cases a tolerance in the mucous membrane of causes which in others produce such trouble and suffering. And again we border on that enticing and mysterious ocean of the unknown,—let us not believe the unknowable.

Near the free border of the soft palate, where the epithelium begins to change from the squamous to the columnar variety, papillomata of some size are frequently to be seen which have never given rise to symptoms. They *never* do unless they have long pedicles. The abnormality of a cleft uvula (not a double or supernumerary uvula as often described) is very common.

We hear very much less of late of granular pharyngitis, that uneven condition of the surface of the posterior wall of the pharynx due to the deposit in the subepithelial layers of an accumulation of round cells,—or to the uneven and incomplete atrophy following the more general lymphoid thickening of infancy, which I am inclined to think the more common pathogenesis. This decline of granular pharyngitis as in itself a pathological explanation of many morbid sensations, is due to two causes :

1st. Symptoms which were formerly ascribed to this condition have been shown to be due to other causes in many cases,—disease of the tonsilar crypts, sinuses in the naso-pharynx, intra-nasal obstruction, chronic catarrhal laryngitis, &c., &c.

2d. Because, and this concerns us here, this circumscribed lymphoid thickening is not only observed to exist in very many cases without noticeable discomfort, but where fairly successful attempts at removal have been made, we only too often find the accompanying symptoms persist. I doubt very much if this condition of the posterior wall in itself ever produces symptoms, though on the lateral wall of the pharynx where the mucous membrane is thrown into folds by deglutition and articulation, it evidently does sometimes cause discomfort. Almost always, however, there is some concomitant lesion having a common origin in the inflammations of infancy and adolescence.

The number of cases which we see in private practice, as well as in the hospitals, who complain bitterly of a tickling, or a dry feeling, or an aching, or some other more indefinite, but none the less distressing sensation in the oro-pharynx, is very large. A cursory inspection frequently reveals the cause in a fair proportion of cases, and the operative procedures for relief are usually attended by success, but not always, and especially not in those cases where the lesion seems only slight. A careful examination with a probe, and the proper appreciation of rubbing surfaces, may reveal the local cause in a smaller proportion of cases, but there will still remain a number in which no local condition explains the symptoms. Gout, rheumatism, and especially dyspepsia are at the bottom of many such symptoms, but without a consideration of the general nervous irritability, probably induced in some instances by these diseases, in others by corporeal or psychical influences which we cannot ascertain or fathom, these cases of so-called paræsthesia cannot be explained. And in using this term I would frankly remark that we are too often blinded by the glitter of a Greek polysyllable to look further into Etiology. To tell a patient who has a tremendous pain in his face that he has neuralgia may satisfy his curiosity if it does not relieve his sufferings. But we should guard ourselves from thinking we have told the patient anything he did not know before. We have possibly taught him Etymology, but not Etiology or Pathology.

You are doubtless familiar with the patient who insists that she has a fish bone in her throat, and is not satisfied when you tell her she has not. Occasionally you are able to assure her that you can see the scratch on the mucous membrane it made when it went down. Usually, however, though it is evident that she is honest in her assertion that she feels it, the most careful scrutiny fails to reveal any abrasion of the surface. In such a case we explain the fact to ourselves by supposing that there is a scratch, but that it is so hidden by mucus or projecting papillæ, that we do not see it. This gives us a hint as to more puzzling cases. To offset my previous assumption of no local change, but rather a general irritability we may conjecture that some of these cases of paræsthesia would reveal some lesion of the mucous membrane, could it be carefully enough examined,—some plugged and dilated gland, some inflamed papilla,—possibly under the microscope some inflammation of the terminal filaments of the sensitive nerves. In other words, that it is our powers of observation that are at fault and not the patient's fevered imagination.

I occasionally see cases of another kind, which I have never seen described or heard explained. Naturally I am loath to believe I cannot recognize gross abnormalities of the pharyngeal mucous membrane, but frankness compels me to acknowledge that I not infrequently see cases who complain of all the symptoms of acute pharyngeal inflammation, in whom I am unable to detect any such condition by local appearances. These patients complain of having had for several days a very sore throat. Deglutition is very painful. They have no coryza, no increase in the pharyngeal secretion, no hoarseness, but they insist that their throat is very sore, and they open their jaws cautiously as though it hurts them. There is no espccial external tenderness nor glandular enlargement. The temperature is only raised a degree or two, and the pulse correspondingly. They seem languid, and are undoubtedly suffering physically. Examination of the fauces, postnasal space, base of the tongue and lower pharynx, fails to reveal any especial redness or swelling. Sometimes there is, especially in young women, a marked paleness of the pillars of the fauces. These cases are seen in the dispensaries in New York more frequently in the winter, and while acute throat inflammations are rife. The symptoms apparently do not last long, as they rarely return more than once or twice after giving them some kind of gargle. An observer accustomed only to look into throats casually in general practice, may easily allow his imagination to draw pictures to correspond to the symptoms, or the unskillful manipulation of the tongue depressor may cause enough gagging to congest temporarily a normal throat, but one long accustomed to spend a number of hours each day inspecting throats with a strong light is not apt to allow either his imagination or his technique to mislead him, and I am sure some of you must have seen these cases, and perhaps have a satisfactory explanation. I have only a conjecture. Perhaps we have to do here with a sub-mucous or muscular inflammation of slight intensity.

The lingual tonsil and its diseases have been described in text books, and in special papers by many careful writers. It is a locality where we meet in practice with many disappointments and many surprises. As you know, the lingual tonsil, like the other tonsils, is made up of lymphoid cells with a delicate reticulum or areolar tissue for a frame work. It is most abundant under and around the epiglottis, joining frequently at each side with the faucial tonsils. Its presence has been described as giving rise to various phenomena often very distressing to the patient,—prickling, tickling sensations, the feeling of a foreign body, sometimes causing frequent deglutition and giving rise to cough, even dysphagia and laryngo-spasm so severe as to be distressing and alarming. Now as a matter of fact we see all these symptoms, except perhaps the graver ones last mentioned, without any marked overgrowth of lymphoid tissue. I say any *marked overgrowth*, because lymph nodes at the base of the tongue appreciable to the naked eye are a normal and constant occurrence. It is a very common experience to see very marked hypertrophy of the lingual tonsil,—so great that it would seem it certainly must interfere with the action of the epiglottis against which it evidently rubs with every movement of the tongue,—and yet the patient is without symptoms. Further, I have seen a moderate hypertrophy with very marked symptoms. These cases are often very confusing.

A female medical student who had no appearance of ever having had an ache or a pain, came to me not long ago giving a moderate account of symptoms plainly referable to the root of the tongue. She had been treated for "catarrh" by numerous practitioners of more or less intelligence. Examination showed a very slight enlargement of the lymphoid tissue of the lingual tonsil, otherwise a healthy nose and throat. I explained the condition of affairs to her, and assured her that the affection did not amount to much. She was advised to disabuse her mind of the idea of "catarrh" and to relegate the symptoms to the realm of sensations. Two or three months later she assured me she had not thought much of the matter since. And here is a contrasting case. A classmate of the former case, also of a particularly healthy aspect gave me a similar account of herself, but in a very much more vivid and emphatic way. She announced with the confidence born of a two years' experience with elementary medical literature, that she had "mycosis pharyngis". Some one had looked in her throat and told her so,—nay, had examined under the microscope the contents of her tonsilar crypts and found mycelial threads. After examination I told her with all the emphasis that one is apt to use under such circumstances, that she did not have "mycosis pharyngis", and, moreover, I did not believe she had ever had it and that the ordinary chances of human life were against her ever acquiring it in the future, that a microscopic examination of almost everyone's tonsilar crypts would show mycelial threads, but that was not "mycosis pharyngis".

The faucial and lingual tonsils were only very slightly abnormal, and I gave her the same advice as the other student. She, however, soon came back and said her symptoms continued to be very annoying, and she knew she had "mycosis pharyngis" because she could see the spots herself in the glass. I gave her a hand glass and told her to show them to me. After poking around in her throat with a lead pencil she said she could not see them now but they were there. You may imagine that when she returned for the third time to ask me what caused the tickling and extremely distressing feelings if not "pharyngo-mycosis" I was in a state of mind to operate on her throat with vigor if not with discretion. With the scissors and forceps I cut away all the lymphoid tissue at the bottom of the left faucial tonsil I could grasp, and altogether it did not amount to more than the size of a green pea. Some weeks later she assured me with every appearance of gratitude that "the operation had greatly relieved her". I am still in doubt as to the cause of her symptoms. Men and women with indigestion, and women at or near the menopause, form the large bulk of these cases. There is no part of the nose and throat in which the index of individual or local irritability of the mucous membranes is so important a factor to consider in deciding the question of treatment.

The galvano-cautery is the means usually recommended for the treatment of these cases, and is the one which I have chiefly employed. I hope, however, that I shall not again be tempted to use it at the base of the tongue. Where symptoms are dependent on a mass of lymphoid tissue in that situation large enough to call for surgical interference, it should be cut or snared off. Where the growth is too small or too flat for this, the application of nitrate of silver in solution, or other astringent, will answer a better purpose locally than the cautery. Superficial cauterization simply causes inflammation, and very painful inflammation, too. Inflammation causes the effusion into the tissues of the very elements of which the hypertrophy consists, *i. e.* small round cells. The good that such cauterization does, if any, consists in the destruction of the ends of the sensitive nerves, and tends to quiet the hyperæsthesia. Unlike the enlarged faucial tonsil, the base of the tongue is an exceedingly sensitive spot. The abundant secretion prevents a thorough cocainization. It is an organ subject to almost continual and very free movements. The lymphoid tissue is diffused, as a rule, over a considerable area which is not well defined. The cauterization has to be done with the aid of a mirror and with guarded point to prevent scorching the epiglottis. I have seen œdema of the epiglottis and extreme suffering caused by this procedure where all the care of a practiced hand was used at the operation. For all these reasons, and because the relief afforded is uncertain and usually but slight, because digestive disorders are an important factor in the symptomatology, and above all, because in so many cases the symptoms depend more upon the general nervous tone of the patient, I am extremely loath to use the cautery in this situation, though I use it vigorously on adult faucial tonsils. What I have said in regard to the symptoms of the lingual tonsil applies as well to enlargement of the venous plexus, so frequently seen at the base of the tongue. The symptoms exist without the lesion, and the lesion very frequently without the symptoms.

Mr. President, and Gentlemen, I have occupied so much of your time already in detailing facts in regard to the nose and the pharynx that are doubtless well known to you and in applying to those facts principles that are familiar, if not tangible, that I cannot ask you to follow me with the same patience into the larynx. The phenomenon of "clergyman's sore throat" is well known to the fashionable laryngologist. The shores of the Mediterranean, the atmosphere of the Golden Gate and of Santa Barbara, the scenery and the life of the land of the Mikado seem to be a necessity for the larynx of the pulpit and the platform, which has not been recognized for the larynx of the auctioneer's block or of the street vendor's cart. The influence of mind on matter, and especially of pocket book on symptomatology, and treatment, in such cases is so evident and notorious that it only calls for passing notice.

Renan says "*La science pour formuler les lois est obligée d'abstraire, de créer des circonstances simples, tels que la nature n'en présent jamais. Les grands figures du monde ne sont qu'un à peu près.*"

But it is from Nature's book, and not from the printer's book, however scientific, that the successful laryngoloist must learn his therapy and shape his course of action.

The etiology of disease is complex. Although it is simplicity of statement which we seek and which we find in medical lore, we find in practice, if we are truthful and unbiased, a multiplicity of etiological factors. Frequently the removal of one factor allows Nature to overcome the others. In each case we have to consider not only what is the more important factor, but what ones are open to attack Frequently we must, from the force of circumstances, remove a nasal spur, for instance, instead of sending off to the mountains or the woods the worried, neurotic, dyspeptic man. Occasionally the elimination of that spur which had existed undisturbed and undisturbing for years is enough to push Nature again into an equilibrium. These cases are the triumphant ones heralded through the medical prints from continent to continent. They are the themes of gossip, they are the ones whose renown fills our waiting rooms, but do not let us deceive our brethren, and, above all, do not let us deceive ourselves, as to the frequency of their occurrence.

ON SOME LABOR-SAVING USES OF THE RUBBER TYPE STAMP IN TAKING CASE HISTORIES.

BY ROBERT L. DICKINSON, M.D.,

Lecturer on Obstetrics and Assistant Obstetrician to the Long Island College Hospital; Obstetrician to Kings County Hospital.

Read at the New York Obstetrical Society, October 3, 1893.

We know that we ought to keep full histories of our cases in private practice, but few of us do it.

Is there any way to make the labor of writing easier?

The history blanks in use at hospitals are too cumbersome for office use. The pure specialist, such as the ophthalmologist, who sees none but his own line of cases, can have a printed book of history sheets, but we who begin a variety of histories without knowing on what region we shall finally need to take fuller notes, cannot readily use a complete printed scheme. A printed slip to be pasted in blisters the page and causes the book to gape. But for any set of answers that a man is frequently noting down, or for any special subject that he is temporarily studying, a stamp seems to meet the requirements. Nearly all the writing is saved by the method of crossing off unneeded words :

Here is an instance, G standing for gynæcological case :

G MAR. YRS. CHILDREN ; OLDEST YGST. MISC.
LABORS SEVERE FORCEPS PUERPERIUMS FEVER
MENSES FORMERLY NOT PAINFUL IRREGULAR
NOW PAIN NONE SLIGHT SEVERE CRAMPS FRONT R. L. ILIAC REG.
BACKACHE BEFORE DURING AFTER BETWEEN CONSTANT
IN BED DYS.
FLOW FREE SCANTY CLOTS MEMBRANE
IRREGULAR EVERY DAYS WEEKS LASTING DYS. LAST MEN.
VAG. DISCHARGE CONSTANT PROFUSE SLIGHT MUCUS PURUL FOUL
URINATION FREQUENT NOT PAINFUL DYSCHEZIA DYSPAR.
WALKING WORKING NOT PAINFUL DATES TROUBLE FROM

Words not wanted have the pen run through them.

Symptoms that are aggravated are underscored.

Points that are dubious are indicated by a question mark.

If, for instance, the patient is irregular, the letters ir are struck out. If her main suffering is backache or free flow, it is instantly indicated by a line under the word. If vaginal discharge or dyschezia are absent, the words are cut out. If it is uncertain whether the patient had puerperal fever or no, an interrogation point after the term shows it. We note, we will say, Menses . . Now Pain . . severe . . r. iliac reg . . before during . . in bed 2 days.

Moreover, by stamping this matter on the left hand side of the page there remains a half page, more or less, to the right, in which to modify or amply the statements of the schedule.

A neater method consists in underlining the required words in the above examples.

For special studies in clinics stamps are of much value. Here is an item I am stamping on the history blanks in my two services in order to gather statistics as to the amount of motion in the symphysis after symphyseotomy, as compared with the results after ordinary labors and difficult and prolonged or instrumental deliveries :

CONDITION OF SYMPHYSIS. . . DAYS AFTER DELIVERY.

	MOTION: UP AND DOWN.	BACKWARD AND FORWARD.
STANDING SWAYING FROM FOOT TO FOOT.	NOT PERCEPTIBLE. ESTIMATED AT CM IN	NOT PERCEPTIBLE. ESTIMATED AT CM. IN.
ON BACK SWINGING LEGS.	NOT PERCEPTIBLE. ESTIMATED AT CM. IN.	NOT PERCEPTIBLE. ESTIMATED AT CM. IN.

Most new-born male children are found to have well marked preputial adhesions. In a large number of these cases much secretion, and often very adherent secretion, has to be scraped away. For some time I have, in all cases, stripped back the foreskin in the early days even at its tightest, and believe it always necessary because of the frequency of irritation due to these abnormal conditions. To properly tabulate these cases I am using the following stamp :

PHYMOSIS. AGE DYS. MOS. YRS. FREQ. MICT. ERECTIONS
PENIS LARGE FOR AGE MASTURBATION
OPENING TINY SMALL LARGE ELASTIC THICK RESISTING
ADHESIONS NONE SLIGHT FIRM OVER ENTIRE GLANS ONLY AT
RETAINED SECRETION NONE LITTLE ABUNDANT HARD ADHERENT
STRIPPED BACK DRESSING
FISSURES ŒDEMA READHESIONS HEALED DAYS
REPEATED EVERY 1, 2, 3, 4 DAYS.

In gathering data concerning the physical changes in the vulva produced by self-abuse—a subject on which there is much difference of opinion, yet a condition we must learn to recognize—one only sees cases that are of any real value as evidence at considerable intervals, and one is likely to forget to enter many items in reporting them. The following illustrates the value of the stamp in making a special study wherein completeness is desired:

M. PREPUCE LARGE LONG SMALL SHORT WRINKLED ADHERENT
CLITORIS LARGE LONG SMALL RETAINED SECRETION
LABIA MINORA LARGE SMALL RUGOSE PIGMENTED MOTTLED GRITTY
LABIA MAJORA ROUGHENED VARICOSE VEINS
URETHRA CARUNCLES SKENE'S GLANDS ENLARGED
HYMEN SMALL IRRITABLE DISTENSIBLE SHAGGY
VAGINA ROUGHENED DRYISH ANUS PIGM. PILES
LEVATOR HYPERTROPHIED SPASM RELAXATION
ADMITTED DENIED YEARS FREQUENCY
VULVAR VAGINAL.

One readily catches the knack of making a clean printing. A level surface is always needed, and with the hand stamp, a certain

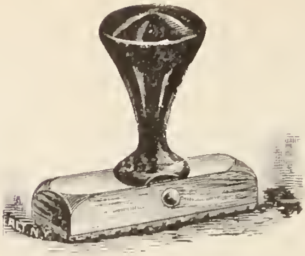

Fig. 1.—Hand-Stamp.

amount of steadiness in holding the stamp. Of the two kinds, the hand stamp is the less expensive ($1 to $1.50) and takes up much less room. But it requires more care in printing than the self-inker does. The self-inker is best for very frequent use. With care in stamping the simpler form serves my purpose satisfactorily.

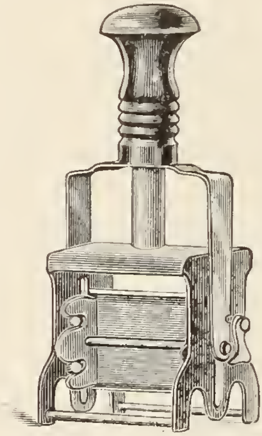

Fig. 2.—Self-inking Stamp.

In getting up one of these stamps one chooses any desired wording that will not cover much more space than that of the samples here given, 1½x3 inches, or 2x4, as a larger size is more difficult to print evenly. Any kind of type may be chosen, but smaller sizes than those given print blurred at times. My stamps were made by the Barton Manufacturing Co., 338 Broadway, New York, the firm that makes the medical outline stamps for recording and picturing cases. They will submit a book of specimens of type, and proofs, and prices, on request.

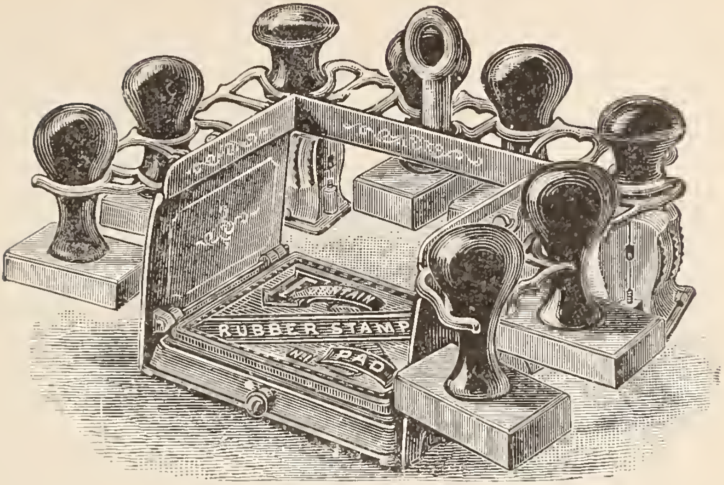

Fig. 3.—Rack for Stamps and Pads.

Each stamp here given is a separate piece of rubber, being a cast of metal type thus set up; but one can buy fonts of rubber type and set them up himself if he chooses.

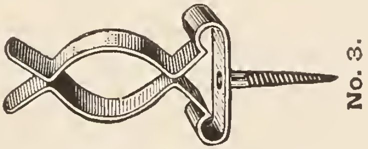

Fig. 4.—Catch for Stamps—to be fastened inside drawer.

Among other stamps that are of value in office practice a fifty cent dater (OCT 7 1893) may be mentioned, and a stamp printing the following:

THIS IS PRESCRIBED FOR THE PRESENT STAGE
OF THE CASE. UNDER NO CIRCUMSTANCES REFILL
OR GIVE A COPY WITHOUT MY WRITTEN ORDER.

The method I have described promotes system and thoroughness, is labor-saving and inexpensive, produces sufficiently neat results, and above all, is flexible, so that every man can adapt it to his own needs.

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Books for Review and Exchanges should be addressed Brooklyn Medical Journal, 356 Bridge Street, Brooklyn, N. Y.

All other Communications, Articles for Publication, etc.,should be addressed Editors Brooklyn Medical Journal, 173 Joralemon Street, Brooklyn, N. Y.

Remittances should be made by money-order, draft or registered letter, payable to Brooklyn Medical Journal, and addressed to Business Manager.

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Electrotypes will be furnished authors free of charge, if proper drawings are provided. Electrotypes of engravings will be furnished authors at cost, when they wish to preserve them for future reproduction.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the printer's charge to the Journal.

EDITORIAL.

THE GAME OF FOOT-BALL.

Hardly a day passes that there is not chronicled in the newspapers some severe accident to a foot-ball player, and in a large number of instances the result of injuries received is a fatal one. The popularity of the game among college students is so great that we fear college professors are rather disinclined to interfere with what, we are sure, they must regard as an excess of physical exercise. But there can be no doubt that unless something is done to restrain the enthusiasm of the students, the game will become so unpopular that nothing but its complete abandonment will satisfy a public which is already beginning to ask why such practices are allowed. The game properly played is one which is well calculated to do good to those who engage in it, and it has deservedly obtained a place among the manly sports from time immemorial, and those are its true friends who see the dangers which attend it as now practised, and call for its modification. The game has come to be, not a strife between teams, but a contest between individuals, and in the arrangement of the contestants, selections are made of individuals to oppose individuals, until the game amounts to a series of fights, such as we hear of in the prize-ring, only that in the modern game of foot-ball, one can see at one time, and for the payment of a single admission fee, as many contests as there are opposing couples.

We are led to the above reflections by paragraphs, of which the following are examples :

THIGH BROKEN AT A FOOT-BALL GAME.

Jersey City, N. J., Nov. 30.—During the progress of a game of foot-ball on the Newark Bay shore this afternoon, Edward French, fourteen years old, of Linden avenue, fell and broke his right thigh. He was taken to the City Hospital.

INJURED IN A FOOT-BALL GAME AND DIED.

Hartford, Conn., Nov. 29.—John White, the young man who was injured in a foot-ball game at Farmington on Saturday, November 28, died to-night at the Hartford Hospital. He played on the Farmington Athletic Club team, and the game was with the Yale Seniors. The accident happened during a scramble, when White had the ball, and fell underneath. His head was jammed down so that a serious accident to the spine was caused, resulting in paralysis. He was helpless up to his death.

That this view which we here express is in accord with that of others, is shown by the following extract from the annual report of the Superintendent of the Military Academy at West Point :

"Several rather severe casualties happened in outdoor games, and in exercises at will in the gymnasium. Foot-ball contributed the bulk of such casualties, and in some cases the injuries were of such gravity as to threaten permanent disability, but, happily, in every instance complete recovery ultimately resulted.

"It is doubtful, in my opinion, if the benefits derived from playing this game, which I am free to acknowledge are very considerable in some directions, are commensurate with the risks it entails to life and limb, which, according to statistics, are much greater than are commonly supposed."

◆

CHICAGO WATER SUPPLY.

Our readers will doubtless recall the observations made by us some months ago on the subject of typhoid fever in Chicago, and its relation to the water supply of that city. In a paper read at the recent meeting of the American Public Health Association in Chicago, the Commissioner of Health of that city quoted an interesting series of statistics which demonstrate the close connection of the water with the causation of the fever. For the year ending September 30, 1892, in a mortality of 26,646, the deaths from typhoid were 1,790, or 6.72 per cent. This represents at least 17,900 cases of the disease. During the greater part of the succeeding year the shore inlets of the water supply were closed, and the water was taken in four miles from the shore. At the end of the year, September 30, 1893, the records showed a mortality in the whole city of 26,977; while the deaths attributable to typhoid were but 712, or a percentage of 2.64.

The amelioration in the prevalence of typhoid is still more remarkable when we remember that the reduction occurred at a time when the city was filled, sometimes to overflowing, with a vast throng of strangers. The summing up of the paper by the Medical Record is full of suggestion, and is to the people of Brooklyn very encouraging, inasmuch as the figures quoted therein place us above all the American cities in our freedom fromtyphoid, and only surpassed by London and Berlin. Would filtration of our water reduce our mortality still more?

AMBULANCE STREET CAR.

In St. Louis the main hospitals are located along lines of electric railroads, and this has been taken advantage of as a means of conveyance thereto of those who need hospital treatment. For this purpose an ambulance has been constructed, propelled by electric power, and thoroughly equipped with all needful appliances. Situated as our hospitals are, this plan is hardly practicable here, although if it were, the comfort which the unfortunate would derive from transportation over steel rails would be in marked contrast to the jolting which they must now experience in riding over many of our streets. It is possible that although not adapted to all our hospitals, the plan might be utilized by some; perhaps the county hospital at Flatbush might avail itself of it. A track running from Flatbush Ave. to the county buildings would give direct connection between the city and its public institutions.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY COUNTY OF KINGS.

Meeting October 17, 1893.

The Vice-President, Dr. George McNaughton in the Chair. There were about 100 members present. The minutes of the September meeting were read and approved.

The Council reported favorably on the following applications and recommended that they be elected to membership: Dr. Arthur M. Pratt, Dr. Burtis R. Wakeman.

The council recommended the acceptance of the resignation of Dr. L. C. Baldwin, on account of removal from the city.

On motion, duly seconded and carried, the resignation of Dr. Baldwin was accepted.

The secretary presented the following applications for membership:

Dr. William Henry Steers, 213 Spencer street, Bell. Hospital Medical Coll., 1890; proposed by Dr. Eugene J. Carolan; Dr. D. Myerle.

Dr. James Herbert Shawe, 280 Clinton street, L. I. C. H., 1893; proposed by Dr. J. H. Raymond; Dr. Geo. M. McNaughton.

Dr. William Simmons, 175 Remsen street, L. I. C. H, 1891; proposed by Dr. J. E. Sheppard; Dr. H. A. Alderton.

SCIENTIFIC BUSINESS.

Remarks on the Initial Lesions of Syphilis, by Dr. J. M. Winfield.

Syphilis of the Nervous System, by Dr. C. F. Barber (read by Dr. S. E. Jelliffe).

Tertiary Syphilis, by Dr. George D. Holsten (read by Dr. J. M. Clayland).

The Treatment of Syphilis, by Dr. Henry H. Morton.

These papers were discussed by Drs. H. W. Rand and William Browning.

NEW BUSINESS.

The Secretary, Dr. David Myerle, referring to the sense of the Society in regard to the prosecution of illegal practitioners, as expressed at the May meeting, offered the following preamble and resolutions, prepared under advice of counsel, and moved their adoption.

Whereas, it has heretofore been brought to the knowledge of this, the Medical Society of the County of Kings, that certain individuals have been prescribing medicines and drugs and otherwise performing the offices of a physician, and have been surgically treating accidental injuries and otherwise performing the offices of a surgeon within the County of Kings, without having first complied with the requirements of the statutes of this State made and provided for the regulation of the practice of medicine and surgery therein; and

Whereas, power is given by law to this society to proceed against any such persons and others so unlawfully practicing medicine and surgery, and public policy and the safety of the public health make it expedient that such illegal practitioners should be proceeded against according to law; and

Whereas, it will become necessary to that end to employ counsel learned in the law ;

Now, therefore, be it resolved, that this, the Medical Society of the County of Kings, proceed by due process of law against such persons or any other persons so unlawfully practicing medicine or surgery within this county ; and be it further

Resolved, that the Secretary of this Society, Dr. David Myerle, be and he is constituted the agent or committee of this society with power to employ and retain counsel for this society for such procedure, it being understood that the compensation fee for such counsel shall come out of the fines collected; and be it further

Resolved, that the Secretary spread these resolutions, or a copy thereof, upon the minutes of this meeting.

These resolutions were seconded by Dr. Hutchinson; a vote being taken the resolutions were declared unanimously adopted.

There being no further business the meeting adjourned.

David Myerle, M.D., *Secretary*.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society Building, 356 Bridge street, on Tuesday evening, November 21st, 1893, at 8 o'clock.

The President, Dr. John C. Shaw, in the Chair.

There were about 100 members present.

The minutes of the last meeting were read and approved.

The Council reported favorably upon the following applicants and recommended that they be elected to membership:

Drs. James H. Shawe, William Simmons, Howard B. Speer and H. S. Slevin.

The following having been favorably reported upon by Council were declared elected to membership: Drs. Arthur M. Pratt and Burtis M. Wakeman.

The Secretary presented the following applications for membership:

Drs. Horace S. Warner, 372 Lewis avenue, College of Physicians and Surgeons, N. Y., 1884; proposed by Dr. F. H. Stuart; Dr. D. Myerle.

William Austin Tomes, 500 Classon avenue, College of Physicians and Surgeons, N. Y., 1891; proposed by Dr. William C. Braislin; Dr. C. F. Barber.

James Cole Hancock, 51 Cambridge Place, College of Physisians and Surgeons, N. Y.; proposed by Dr. George McNaugton; Dr. J. H. Raymond.

Dr. F. M. Sharp, 134 South Oxford street, College of Physicians and Surgeons, 1887; proposed by Dr. George McNaughton; Dr. J. H. Raymond.

Howard Burnett Speer, 728 Carroll street, L. I. C. H., 1893; proposed by Dr. W. A. Berendsohn; Dr. Francis J. Magilligan.

Briton H. Richardson, 284 Stuyvesant avenue, L. I. C. H., 1893; proposed by Dr. R. L. Dickinson; Dr. Charles Jewett.

The Secretary read the resignation of Dr. H. P. Dorr, with the request that he be placed on the list of non-resident members. On motion, Dr. Dorr's resignation was accepted and his name placed on the non-resident list.

A communication from the Brooklyn Dermatological and Genito-Urinary Society, conveying the thanks of that society to the Kings County Society for the use of a meeting room in the Society Building, was read, received and placed on file.

A communication was received from Dr. John Griffin, Health Commissioner of Brooklyn, requesting the advice of the Society in regard to an enclosed letter from the Homœopathic Medical Society of the State of New York, suggesting that tuberculosis be placed on the list of contagious diseases and subject to the usual restrictions. On motion of Dr. Bartley, this communication was received, ordered acknowledged and placed on file.

Dr. Burge moved that a committee of three be appointed by the Chair to consider the matter. Seconded and carried; so ordered. The Chair thereupon appointed as such committee, Drs. John A. McCorkle, Geo. A. Evans and Ezra H. Wilson.

SCIENTIFIC BUSINESS.

Dr. E. A. Day presented a paper entitled "Rectal Feeding," which was discussed by Dr. Bartley.

Dr. B. F. Westbrook presented a paper entitled "Notes on the General Treatment of Chronic Pulmonary Diseases," which was discussed by Drs. Evans and Williams.

UNFINISHED BUSINESS.

The Secretary stated that in January last, when the dues for 1893 were fixed at $10, there was then in force, unknown to the Society, a statutory restriction which rendered the action of the Society inoperative, but that, since that time, an act had passed the Legislature allowing such increase of dues. The Council would, therefore, recommend that the by-laws be temporarily suspended and the dues for 1893 be fixed.

Dr. Emery moved that the by-laws be suspended for this purpose. Seconded and carried.

Dr. Emery then moved that the dues for 1893 be fixed at $5, as heretofore.

This motion was seconded by Dr. Evan F. Smith.

In making this motion Dr. Emery stated that when it was proposed in January to raise the dues to $10, and they were so raised, the trustees supposed that the Society was on the eve of going into larger and much improved quarters, and they would, therefore, be under greater expense. In the midst of negotiations looking to this end the offer of Dr. Hoagland was made, and a committee of three members from each medical society in the city convened to consider Dr. Hoagland's proposition. A sub-committee of one member from each society was appointed and, after various meetings, it was resolved that certain steps should be taken, and a special committee was appointed to investigate and recommend to the general committee what action could be taken in the matter. This special committee has several plans under considerations, the culmination of which will require a good deal of time. In the meantime the members are not receiving the immediate benefit upon which the raising of the dues was predicated, and inasmuch as eleven months of the year had passed it was thought wise to allow the dues to remain at $5, as in previous years.

Dr. West suggested that the proper method of acting on this matter would be to reconsider the motion of the Society (passed at the adjourned annual meeting) fixing the dues at $10, and then move as an amendment that the dues be fixed at $5.

After some discussion, Dr. Emery withdrew his original motion and moved that the society reconsider the motion passed at the adjourned annual meeting fixing the dues at $10.

Seconded and carried.

Dr. Emery then moved that the motion under consideration be amended to read, "that the dues for the year 1893 shall be five dollars."

This motion was seconded by Dr. West.

In seconding this motion Dr. West said that it should be understood by the Society that the reason for considering this motion was, that by reason of certain circumstances during the year, the trustees had been unable to furnish to the Society what they expected when they asked for an increase of dues and that it would be unfair to ask foı such advance inasmuch as the promise of greater advantages was the inducement for raising the dues.

The above motion of Dr. Emery was then put and carried.

Dr. Emery said that he had every faith that in the course of a year, or probably within six months' time, the trustees would be in a position to call on the members of the Society for the full $10 dues and give them full value for it.

After some discussion as to notifying the members of the Society of the fixing of the dues at $5, and also as to what disposition should be make of the additional $5 received from those members who had already paid the $10 dues, Dr. West moved:

"That it is the sentiment of this Society that those members who have paid $10 dues for the year :893, be credited $5 toward their dues for 1894." Seconded and carried.

Dr. Bartley moved: That the matter of notifiying the members of the fixing of the dues at $5 be referred to the treasurer, with power. Seconded and carried; so ordered.

NEW BUSINESS.

Dr. Emery referred to the inconvenience and hardship which physicians who were telephone subscribers were subjected to in not being able, when out of their offices, to communicate with them by telephone without either paying the charge of ten cents, or being under obligation to some friend in whose vicinity they happened to be. He thought the telephone authorities should be appealed to to grant physicians the right to communicate with their offices from any public telephone station in the city free of charge, and moved:

"That a committee of three be appointed by the Chair to confer with the telephone authorities, looking toward some amelioration of the present condition of things in this respect."

The motion was seconded and carried, and the Chair thereupon appointed as such committee, Drs. Z. T. Emery, E. H. Bartley and G. R. Butler.

There being no further business, on motion the meeting adjourned. DAVID MYERLE, M.D.,

Secretary.

BROOKLYN GYNÆCOLOGICAL SOCIETY.

Meeting of June 2, 1893.
Approved October 6, 1893.
The President, Dr. W. B. Chase, in the Chair.

PRESENTATION OF SPECIMENS, ETC.

Under this head Dr. Maddren reported the result of Dr. Van Cott's examination of Dr. Barber's specimen of supposed lithopedion, presented at a previous meeting (reading from report) · "I beg now to report that after a careful examination I am of the opinion that the valuable specimen which has been the cause of all the expression of views, is not a macerated fœtus, nor is it a lithopedion in the strictest sense of the term, but rather a mummy. If it were macerated there would be no outer tegumentary structures and the bones would probably have separated. It seems to me that in this specimen the soft parts have been gradually deprived of their watery portion and have shrivelled and contracted over the bony structures."

Dr. Skene challenged this statement and still believed that it was a macerated fœtus, that the process which mummifies is a form of embalming, and produces an entirely different specimen.

Vice-President, Dr. George McNaughton, took the Chair.

Dr. Walter B. Chase presented the paper of the evening, entitled, "Chronic Corporeal Endometritis."

Discussion by Drs. Skene, Jewett and Raymond.

NARRATION OF CASES.

Dr. Corcoran reported several cases of high temperature after confinement for which there was no apparent cause, the fever running a short course and the patients recovering.

Dr. Jewett also reported several similar cases of high temperature in post-partum cases; also one case where the high temperature continued for ten days, the patient finally developing well-marked pneumonia, the fever then running a regular course and the patient recovering.

Discussion by Drs. Chase, Jewett and Corcoran.

Dr. Corcoran:—I would like to ask Dr. Jewett if in the last two or three months he has seen any cases of high temperature following confinement without any explanation in the patient's condition to account for it?

Dr. Jewett:—I frequently have difficulty in determining the cause of fever after confinement. A case in point is a recent hospital patient who for a long time had a temperature of 105. The cause of this was never fully explained. There may have been a small deposit of pus somewhere in the pelvis, but nothing that appealed to the touch could be discovered. She finally recovered, after a sickness of three or four weeks.

I have been struck with the frequency with which a small exudate in one or both broad ligaments is found with what seems to be a malarial fever and yields to quinine.

Dr. Corcoran:—The reason I mention this was because I have seen two cases post-partum in both of which the labor was rapid and easy. In the first case the placenta was expelled by uterine contractions. In this case on the second day in making my daily visit I noticed the pulse was rapid and the temperature 100, but the patient expressed herself as comfortable. On the third day in the evening the temperature was 104. Everything was all right in every possible way; there was no trouble of any kind except the temperature. I went back intending to wash out that uterus to be on the safe side, but I did not do so, as there was no reason for it, after a digital examination. The case ran on for a week with a temperature from 101 to 104, which could be brought down by antipyretics, but on which quinine had no effect. In about a week the patient got well. There was no lesion in any part of the body.

The second case was an exactly similar one, in the hospital at the same time. It was a patient from whom a fibroid tumor had been removed. The house surgeon sent for me on the eighth day after the operation. She had a temperature of 104, and he blamed the operation for it, but in the course of conversation she complained of pain in the back, and I thought of grippe, treated her on that line and she got well.

Dr. Jewett:—It is an important rule in post-partum and in all other cases to interrogate all the organs. I saw during the last winter a case of post-partum fever which continued for several days with no sign of sepsis. At the end of a week or more the woman developed a well-marked pneumonia which ran its course without cough and finally resolved.

Dr. Chase:—I would like to inquire of Dr. Jewett if he has witnessed cases of high temperature after confinement, in which there has been post-partum hæmorrhage or ante-partum hæmorrhage, that peculiar form of fever following loss of blood where the patient suffers no pain and little or no discomfort?

Dr. Jewett:—The hæmorrhage, post-partum, would imply a relaxed condition of the uterus and retention of membranes or clots, conditions favorable to sepsis.

Dr. Corcoran:—In the second case I did wash out the uterus on the second day. The temperature was 102, and half an hour afterwards it was 104½.

Dr. Chase:—Is it a fact that we find elevation of temperature after loss of blood from any cause after operation in conditions not puerperal, which is wholly due to the loss of blood, and in which the patient suffers no apparent sickness and very little damage? Have you ever witnessed anything analogous to this in great loss of blood from labor, where there is no sign of sepsis?

Dr. Jewett:—That is very likely possible, but I have never seen a case that presented any evidence of that kind.

Executive Session.

NEW BUSINESS.

Under this head Dr. J. H. Raymond presented the following:

Dr. Raymond:—It will, I think, be acknowledged that the medical profession of Brooklyn is far behind our sister city in the the opportunities which are afforded for scientific work. This is due more particularly to the insufficient facilities which exist here for convenient reference to the standard books of reference and the current literature of medicine. Besides this the meeting rooms of our various societies are poorly ventilated, so that after a half an hour a longer stay in them is, to say the least, very disagreeable. Any plan which will be practicable and which will, when carried out, result in providing for the profession of Brooklyn a building which will have ample accommodations for the assembling of the regular physicians of the city, and a library and reading room in which can be found all the desirable literature, and where this may be so protected from fire as to lead benevolent donors to bequeath their private libraries to the organization—any such plan would seem to appeal to all as a "consummation devoutly to be wished."

Can an organization be effected in Brooklyn in which every member of the regular profession can participate and which shall take the place of the eight or more separate societies that now exist, and whose articles shall be such that all can subscribe to them? For my own part I believe it can be done. I am authorized by one who has the best interests of the profession deeply at heart, to say that if the various societies of the city will unite in the formation of such an organization, as for instance, The New York Academy of Medicine, and will merge their respective societies into the new organization, and will secure a site which will be suitable, and will erect a building that will be an honor both to the profession and the city, he will assist in such an enterprise in a substantial manner.

Will this Society take such a proposition into consideration and appoint a Committee of Conference to meet with committees from the other societies? It is, of course, understood that this is a preliminary proceeding, and that the appointment of a committee in no wise obligates the Society; that it is to confer only and to report back to the Society such recommendations as it may deem wise.

I may say, Mr. President, that this is not to be looked upon as in any sense antagonistic to the proposition which has been made by the Medical Society of the County of Kings to provide a building, but I think that we all feel that to erect such a building in Brooklyn as will meet the wants of the profession for a generation to come, is a project which will be most difficult of accomplishment by any single society.

I am very glad that Dr. Matheson is here to-night and I hope he will speak freely on this subject. This plan which I have to suggest here is one which looks toward the erection in Brooklyn of a building which will cost not less than $100,000, and a building which will, as I have indicated here, take such a position in Brooklyn as The New York Academy of Medicine has taken in that city. I am not at liberty to mention the name of the individual to whom I refer, but if a plan of this kind could be carried into effect and it is considered desirable to do it, the part which this gentleman would take, is a part which, I am sure, if I felt at liberty to mention figures, you would all consider to be a most handsome proposition.

I would like to ask Dr. Matheson whether he thinks that it is a feasible thing for the County Society to erect such a building as is outlined in a plan of this kind?

Dr. Matheson:—I do not think the County Society is prepared to build any such building.

Dr. Skene offered the following resolution:

Resolved, that this Society accepts most heartily the proposition made by Dr. Raymond; that a committee be appointed by the President in the usual way to further the idea and seek the coöperation of all the societies in the city, and all medical men of the medical profession.

Seconded by Dr. McNaughton, and unanimously adopted.

After some further discussion Dr. Maddren moved: That the President appoint a Committee of Three for the purpose expressed in the resolution. Seconded and carried.

The President thereupon appointed Drs. Skene, Maddren and Jewett, as such Committee.

There being no further business, on motion the meeting adjourned.

L. GRANT BALDWIN,
Secretary.

THE BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

At the annual meeting of the Brooklyn Dermatological and Genito-Urinary Society the following officers were elected:

President, Samuel Sherwell, M. D.; Vice-President, Frederick A. Jewett, M. D.; Secretary and Treasurer, James MacFarlane Winfield, M. D.; Executive Representative, Henry H. Morton, M. D.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M. D.

ON THE JUSTIFIABILITY OF LIGATURE OF THE FEMORAL VEIN.

R. Irzebecky and St. Karpinsky (*Archiv. f. Klinisch Chir.*, Vol. xlv., Part 3).

The authors performed the following experiments: The extremities of cadavers were suspended in a vertical direction for some hours and then subjected to massage in a centripetal direction. Where large coagula were present these were removed by incision and the forceps. The vessels were then irrigated for from 15 to 30 minutes with carbon bisulphide, until the latter came away perfectly clear. One common iliac artery, and in addition the hypogastric and epigastric, were ligated. The remainder of the arterial system was then filled with a compound which hardened after injection. The external iliac artery was then exposed above the pubic bone and the femoral vein just below Poupart's ligament. Injections consisting of oil of turpentine, naptha, and bisulphide of carbon were then employed as follows: A glass tube was introduced into the iliac or femoral artery and connected, by means of rubber tubing, to a funnel and a mercurial manometer, the latter for the purpose of controlling the pressure. A glass cannula was placed in the vena cava to which was connected a graduated cylinder.

The amount of pressure necessary to force the injected liquids was first determined; the femoral vein was then ligated. It was then demonstrated that but a slight increase of pressure was necessary, in the majority of the experiments, to overcome the stasis in the extremity.

In case, therefore, of failure of tamponade and lateral ligature, complete ligature of the femoral vein is justifiable.

An interesting point determined by these experiments was the fact that, while elevation of the extremity favored venous return, a more than corresponding embarrassment of arterial supply occurred. Elevation of the limb, therefore, after ligation of the femoral vein, is contra-indicated in impaired cardiac action.

These observations essentially support H. Brann's experiments of injection into the popliteal or smaller saphenous vein following ligation of the femoral vein below Poupart's ligament.

THE ETIOLOGY OF CYSTITIS.

R. Wreden (*Centralblatt f. Chir.*, July, 1893).

In a preliminary communication which refers to bacterial examinations, based upon the researches of Doyen, Clado, Rovsing and others, the author announces that he had to deal with direct infection from the rectum, rather than with bacterial embolism, as believed by the last named as a result of his own experiments. R. W.'s experiments were conducted on rabbitts, injury to the mucous membrane of the rectum being produced by means of hot water injections in some instances, the local use of croton oil in others, but more frequently by mechanical injury brought about by the use of a platinum wire.

The results of these experiments were as follows :

Injuries of the mucous membrane of the anus, even though repeated several times, do not affect the bladder.

Injuries of the rectal epithelium of and above the level of the prostate are followed by cystitis.

The character and cause of the cystitis are entirely dependent on the degree of the traumatism inflicted and the nature of the infectious inflammatory agent.

In these experiments bacteria were found in the bladder identical with those in the rabbit's intestinal canal, or with those introduced into the rectum.

The author proposes to shortly publish an account of some clinical experiences which fully agree with the foregoing.

KOLACZEK'S TREATMENT OF ERYSIPELAS.

(*Centralblatt für Chirurgie.*, July 15th, 1893).

The author has employed the following method for the past ten years, and highly commends it to the profession : rubber tissue of sufficient size to extend about a hand's breadth beyond the affected area is dipped in a 5 per cent. solution of carbolic acid and spread smoothly over the erysipelatous patch. A layer of cotton wadding is placed over this and the whole secured firmly in place by a few turns of a roller bandage. After twenty-four hours this cotton wadding is removed and renewed, a larger piece of rubber tissue being placed over that already in position, if necessary, to cover in any increased area of the disease.

The method seems to be strikingly successful in erysipelas of the extremities; less so upon the face and trunk. After several applications all the rubber tissue is removed, large pieces of the epidermis separating at the same time.

In the case of the lower extremities, an erysipelas commencing at the foot and extending to the leg, the affection has been completely arrested by a single application.

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NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

AMERICAN TEXT-BOOK OF GYNAECOLOGY. Mr. W. B. Saunders, Publisher, of Philadelphia, Pa., announces this work as ready for early issue. It is the joint work of Drs. Howard Kelley, Pryor, Byford, Baldy, Tuttle, and others who stand before the profession for all that is progressive in gynæcology.

The work will contain operations not before described in any other book—notably ablation of fibroid uterus. It is designed as a profusely illustrated reference book for the practitioner, and every practical detail of treatment is precisely stated.

OUTLINES OF OBSTETRICS. A Syllabus of Lectures delivered at the Long Island College Hospital, by Charles Jewett, A.M., M.D., Professor of Obstetrics and Pediatrics in the College, and Obstetrician to the Hospital. Edited by Harold F. Jewett, M.D. Philadelphia. W. B. Saunders, 1894. Crown 8vo. Pp. 264.

Dr. Jewett does himself an injustice in calling this work a syllabus. While it is true that it is a syllabus in that it is used by the Long Island College Hospital students, in following their didactic lectures on obstetrics, still it is much more than a mere outline of the subject. It is really an abstract of the views of the best living obstetricians.

Many important practical hints are introduced which are drawn from Dr. Jewett's large experience as a teacher and practitioner. The chapters devoted to the care of the mother and child during normal labor, and the duties of the practitioner himself at this time are especially valuable No detail is deemed of too little importance to be given, and certainly those who use this book as the basis of their obstetrical studies will have no reason to complain of omissions.

Hegar's sign, which is erroneously described by most authors, is correctly given, together with the proper method by which its presence can be demonstrated.

The author deserves especial commendation for the way in which he emphasizes the necessity of strict antisepsis and asepsis in all manipulations from the simple ante-partal examination to the most difficult operation of obstetrical surgery. The fact is dwelt upon that puerperal fever is due in all cases to the septic infection of the birth canal, and that the most frequent vehicles of infection are the surgically unclean hands of the physician or nurse. Since the tendency of the present day is to regard puerperal fever as an entirely preventable disease, and to hold the physician personally responsible for its occurrence, the rules which Dr. Jewett formulates for its prevention are worthy of the most careful consideration.

Other pathological conditions which occur with labor and in the puerperium are well presented. Both the prophylaxis and treatment of such complications as albuminuria, eclampsia, post-partal hemorrhage, and apnœa neonatorum are clearly and concisely described. In fact the book offers to the practitioner a much better *résumé* of the best modern methods, than do the recent so-called revised editions of the larger and more pretentious text-books.

The book is small, but, including as it does all of the essentials of the subject and clearly described, the practitioner, as well as the student, will do well to have it in his obstetrical library.

H. P. DE FOREST.

VISITING LISTS FOR 1894.

THE MEDICAL NEWS VISITING LIST FOR 1894. Philadelphia: Lea Brothers & Co.

This has been thoroughly revised and brought up to date in every respect. The text portion (32 pages) contains the most useful data for physician and surgeon, including an alphabetical table of diseases, with the most approved remedies, and a table of doses. It also contains sections on examination of urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers and the ligation of arteries. The classified blanks (176 pages) are arranged to hold records of all kinds of professional work, with memoranda and accounts. Four styles are now published: Weekly (dated for 30 patients); Monthly (undated, for 120 patients per month, and good for any year); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). This last style consists of 256 pages of assorted record blanks, without text. This list adapts itself to any system of keeping professional accounts. Each style is in one volume, bound in handsome red leather, with pocket, pencil, rubber, and catheter-scale, price, $1.25. When desired, a ready reference thumb-letter index is furnished, which is peculiar to this visiting list, and will save many-fold its small cost (25 cents) in the economy of time effected during a year. In short, every need of the physician seems to have been anticipated in The Medical News Visiting List.

LEONARD'S PHYSICIAN'S POCKET DAY-BOOK. Bound in Red Morocco, with Flap, Pocket and Pencil Loop, Price Post-paid, $1.00. Published Annually by the Illustrated Medical Journal Co., Detroit, Mich.

The popular day-book is now in its 16th year of publication. It is good for *thirteen* months from the first of *any* month that it may be begun, and accommodates charges for fifty patients daily for that time, besides having cash department, and complete obstetric records. There is space for the diagnosis of each case, or for brief records of the treatment adopted, following each name space. Name of each patient needs to be written but three times in a month. It has the usual *printed matter*, such as: Dose list; poisons and antidotes; urinary tests; exanthematicæ; disinfectants; weights and measures. The book is 7½ inches long and 3½ inches wide, so that it will carry bill-heads or currency bills without folding. It is bound in flexible covers, and weighs but five ounces, so that it is easily carried in the pocket.

The Physician's Visiting List. (Lindsay & Blakiston's). Published Annually for 43 years. The price varies from 75 cents to $3.00 according to the edition.

The new U. S. Pharmacopœia, 1890, which has just been published, adopts the metric system of weights and measures. In order to meet this, a very complete table of the doses of all drugs in both the English and metric systems is contained in this edition of the visiting list. It measures 6⅛ x 3⅞ inches, and the smallest size weighs but 3½ ounces, and is only ⅜ of an inch thick. The large sizes are a little thicker and heavier. It is claimed to be the smallest and lightest visiting list published. Its binding is strong, with gilt edges, uniting durability with neatness. The covers are made of strong leather. The paper, manufactured expressly for it, is strong, and as thin as is compatible with safety, and easy to write upon. It is arranged for 25, 50, 75, and 100 patients per day or week, dated and undated, with or without interleaves for special memoranda. A new undated monthly edition has also been added to the series. The large sizes can be had bound in two volumes, each volume covering six months, for greater convenience.

MISCELLANEOUS.

HEALTH COMMISSIONER EMERY.

Just as we are going to press we learn that Dr. Z. Taylor Emery has been appointed Health Commissioner of Brooklyn. We wish him a most successful administration.

HOAGLAND LABORATORY.

The directors of the Hoagland Laboratory have appointed Dr. E. H. Wilson, Director of Bacteriology, the former Director of that department, Dr. G. M. Sternberg, having resigned to accept the position of Surgeon-General of the Army.

Dr. Smith Ely Jelliffe has been appointed Librarian, in place of Dr. G. T. Kemp, who has resigned to take a position in the Johns Hopkins University.

ERRATUM IN INDEX TO VOL. VII.

C. F. Barker should be C. F. Barber.

INTERNATIONAL MEDICAL CONGRESS.

The undersigned chairman of the American National Committee of the International Medical Congress, which was postponed from September 24th on account of cholera prevailing in Italy, has been notified by the Secretary-General that the Congress will be held at Rome from March 29th to April 5th, 1894. Instructions and documents relating to the journey, etc., are promised for the near future.

Yours very respectfully,

110 W. 34th Street, New York. A. JACOBI, M. D.

OTTO HEURNIUS,
Medicinæ Professor.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

REMARKS ON THE INITIAL LESION OF SYPHILIS.

BY JAMES M'F. WINFIELD, M.D.,

Attending Surgeon to the Kings County Hospital, Department for Dermatology and Genito-Urinary Diseases, Dermatologist to the Long Island Hospital, O. D. P., Assistant to the Chair of Skin Diseases at the Long Island College Hospital, etc.

Read before the Medical Society of the County of Kings, October 17, 1893.

As this paper is to serve as the initial lesion of the subject for this evening's discussion, it will not be out of order to briefly refer to the history of this well-known but often mistaken disease.

Syphilis has been known by this name since the fifteenth century. It became prevalent in Europe shortly after the discovery of America, occasioning much discussion in the medical world of that time. The observers, thinking it was an entirely new malady, originating from the recently established relations with the new continent, called it the American disorder. But America cannot claim this distinction, for subsequent investigations have shown that syphilis had existed in races of men of far greater antiquity. Evidences of bone gummata have been discovered in the skeletons of prehistoric man. The ancient literature of China, Mexico, Greece, and even the sacred writings of the Hebrews, describe a disease the symptoms of which are strongly suggestive of the disorder now known as syphilis. And to us living in the enlightened nineteenth century, this old, prehistoric disease is fraught with as much interest, and we are as actively searching for a cure as were the medicine men of ancient China. At the present day syphilis prevails in all countries. The severity and extent of the disease are not controlled by climate or degree of latitude or longitude. It attacks all alike, be they high or low, rich or poor. The greater the centre of population the more numerous are its victims. England, with its vast maritime traffic, is said to suffer more than France, in spite of the popular belief to the contrary. In the German Empire, Saxony might almost be called the hotbed. This province is, again, a great centre of commerce. In the United States a considerable portion of the inmates of our large hospitals are directly or indirectly affected by it, and a great amount of the practice of physicians in the large cities is influenced by some of the many manifestations of this protean disorder.

Syphilis is a specific infectious disease, transmitted from an affected to a sound individual through the medium of pathological elements containing the specific virus. This contagious element inoculated into a previously healthy subject produces the primary evolution of the disease known as the syphilitic or hard chancre. This lesion is always the beginning of the acquired form in contradistinction from the inherited.

To determine what the exact germ is that produces the various symptoms of syphilis is and has been a fruitful subject for discussion and research.

Since 1837 many bacteriologists have reported discoveries of various micro-organisms, some of which are worthy of brief note, for instance, Hallier's[1] discovery of a micrococcus in the blood of specifically infected subjects, which greatly resembled that found in patients suffering from scarlatina. In 1879 Klebs[2] claimed to have found other cocci and bacilli, and also succeeded in making cultures of the same. Again, in 1882, Birsch-Hirschfeld made a similar discovery. But until 1884 no one succeeded in detecting a constant form, and as there were no definite attempts made to obtain cultures nor the scientific inoculation of animals, the results were necessarily unsatisfactory and contradictory. Late in 1884 Lustgarten[3] announced that by a special method of staining he had succeeded in detecting bacilli in syphilitic tissue. These differed from other similar organisms by their reaction to certain stains. They very closely resembled the tubercle bacilli, but could be differentiated from them by their reaction to mineral acids, and also by the presence of knob-like swellings on their ends and their 8-shaped forms.

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[1] Zeitschr. f. Parasitenkunde, p. 180, 1869.

[2] Arch. f. Experim. Path. u. Pharmak., 1879, Bd. x.

This discovery of Lustgarten raised the hope that at last the exact etiological factor had been found. But a year later Cornil[4] stated that bacilli reacting to the same stains as that of Lustgarten could be found in the normal smegma. And Koebner also said that while they might be found in genital chancre they were never observed in secretions or tissues from extra-genital primary lesions. Lustgarten's and the other investigations regarding the bacteriological origin of this disease have demonstrated to a certainty the presence of bacilli in syphilitic tissues. Just why the results still lack uniformity is not clearly understood, but with the light already gained, we trust the day is not far distant when the microscopical appearance of the syphilitic bacilli will be as well known as the tubercular now is. The latest etiological discovery was last year (1892), when Daehle[5] claimed to have found parasitic protozoa in syphilitic secretions. They are described as flagellate balls of various sizes, possessing active movement and change of shape. Daehle is still studying the subject and promises more details in the future.

After any part of the body has been inoculated with the syphilitic poison there is a period of quiescence. During this time the virus seems to germinate, and after an interval, varying from fourteen days to three months, there appears at the site of the primary abrasion a small, hard, insignificant papule. This is the initial lesion, and with it is ushered in the second stage of incubation. The course and form of the disease may vary according to the susceptibility of the individual, or from accidents attending the inoculation. If only the syphilitic virus was to gain entrance in the abraded spot and then strict cleanliness be observed, the initial lesion would, in all probability, be the dry, scaly papule or the simple erosion. This caution cannot be taken except in cases of experimental inoculation, and consequently the form most frequently met with is what has been known since the the time of John Hunter as the Hunterian chancre or the "ulcus durum." This often becomes a deep eroding sore and as such has been productive of many learned disputes, for on this the unicists and dualists base their arguments. Probably why a sore becomes a deep corroding ulcer, which, under favorable conditions, would remain insignificant, is that the feebly vitalized syphiloma is easily disintegrated by various irritating causes, and also, as many observers have shown, the two diseases, syphilis and chancre simplex, may be inoculated in the same spot, producing what is known as the mixed chancre. Frequently we see a specific sore in which the characteristic induration of a true chancre has followed a soft, ulcerating process. The inference is that the syphilitic germs were lodged in the tissue the same time the chancroidal were, and the results of each appeared at the end of their respective incubatory periods.

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[3] Wiener med. Wochenschrift, 1884, No. 47.

[4] Gazet. des Hopitaux, 1885, No. 90.

[5] Central. f. Bakt., Bd. xii., No. 25.

The following history is of interest, showing that a chancroid may run its course and heal and a true chancre appear immediately after :

Case I. — K., nine days after suspicious intercourse, observed a small, moderately sensitive pustule underneath the frenum. This pustule rapidly grew into a deep ulcer with soft, jagged, irregular edges, presenting all the appearances of a chancroid. With care and treatment this ulcer healed in about three weeks. Ten days later, that is about thirty days after connection, a hard indurated papule appeared at the site of the first lesion. There was but little ulceration with this sore, but it always remained indurated. In due time the secondary symptoms of syphilis followed, verifying the diagnosis of chancre. The patient positively denied any exposure during the month before the advent of the second sore, and if his statement was true (and there is every reason to believe it was) the only conclusion to arrive at is that the two germs were inoculated at the same time and place and that the one with a short period of incubation ran its course first, followed by the slower.

All the absorbing surfaces of the body are susceptible to syphilitic infection, but as the great majority of cases are of venereal origin, the usual site of the initial lesion is on the genitals. The diagnosis of the specific disease about the female genitals is not always easy. The moisture about these parts has a tendency to convert what in the male would be an easily recognized chancre, into a lesion closely resembling a mucous patch, and it is also common to find condylomata associated with the primary sore, rendering the diagnosis of the real trouble obscure.

Chancres of the uterus occur most frequently upon the anterior lip, where they appear as flat ulcers, covered with what seems to be a false membrane. The induration is hard to appreciate. It is also not uncommon to find considerable pelvic adenoplasia, while the gland of the groin remains free.

That syphilis is pre-eminently of venereal origin is not to be disputed, but during the last few years syphilographers and other specialists have recognized the necessity of emphasizing the fact that many cases are innocently acquired, and it is within the province of this paper to add another warning to the many already given by such eminent writers as Fournier, Taylor, Buckley, Allen, etc.

In "syphilis insontium" the initial lesion is of course extra-genital. The non-specific ulcer is less frequently observed in these locations than the true chancre. According to French authorities only two per cent. of all cases of chancroid were extra-genital, while the true chancre was over six per cent.

Dr. Buckley[6] has divided the methods of transmission of non-venereal syphilis into three heads:

1. Transmitted by the ordinary economic relations of domestic or industrial life.

2. Acquired by or from infants in connection with their nourishment and care.

3. Acquired by contact during the various forms of bodily service—surgical, medical, etc.

The following personally observed cases illustrate the first group:

Case II.—P. G., a lad about fifteen years of age, consulted me for a profuse macular syphilide. There were no signs of a primary lesion about the genitals, and on questioning him it was ascertained that about a month previous to the consultation he had had a hard sore on the lower lip which had been exceedingly obstinate to treatment. The remains of this induration were still appreciable. On investigating the possible source of infection, it

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Medical News, March 2–9, 1889.

was learned that, in the office where the boy was employed there was a girl who had a number of mucous patches on the lips and buccal mucous membrane. It was also learned that the employes all drank from one drinking cup. This cup must have been the medium of infection, for the boy had never kissed the girl or come in contact with her in any other way.

Case III.—Another case is that of a boy who acquired the primary lesion on the lower lip from drinking out of the same pail that a lot of workmen used. One of these men was found to be suffering from syphilis.[7]

Case IV.—A peculiar case of primary lesion came under observation about a year ago. A young married woman consulted me on account of a hard, painful ulceration of the lower lip. This lesion had existed for about three months, and had been seen by a number of medical gentlemen, who had treated it by caustic, ointments, etc., but in spite of all that had been applied it not only failed to heal, but became more and more aggravated. The adenoplasia and general appearance of the ulcer, together with its obstinacy to treatment, led to the diagnosis of true chancre. The patient was put on anti-specifics and secondary manifestations watched for. These, however, were never observed. About ten months after her lip became sore her first child was born, who presented all the symptoms of inherited syphilis in a modified form. Possibly the severity of the symptoms in the child and the absence of the secondary in the mother were due to the active anti-syphilitic treatment during pregnancy. The primary lesion was probably acquired by the act of kissing, although this point in the history could not be positively ascertained. The only clew was that she had a female friend who was suffering from some mouth disease, who was in the habit of kissing the patient. Being unable to see this friend it was never known what she was affected with.

Case V.—A young lady received a chancre of the toe from a scissors belonging to her brother who was suffering from the late secondary manifestation of syphilis. She was troubled with an ingrowing toe-nail which she was in the habit of trimming with anything that would cut. One day she obtained a pair of scissors from her brother's room, and in her manipulation the skin about the nail was cut until it bled. This slight wound became indurated and failed to heal, and in due time all the evolution of a very severe attack of syphilis appeared.

The initial lesion of syphilis is often involuntarily acquired through the care of an infant. In these cases the risk is equally as great for the attendant as it is for the child.

The following histories illustrate this class :

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[7] Griffin reported a similar case in the Medical Record for Aug. 22d, 1891.

Case VI.—G., infant, strong and healthy at birth, no suspicion of any specific taint. The mother's lacteal secretion not being sufficient, the services of a wet nurse were required. After the nurse had had charge of the child two months (the boy was now nearly six months old) he developed a severe vesicular syphilide. Examination of the nurse revealed the fact that she was suffering from syphilis and had been for some time. There is no doubt but what the disease in the child was derived from this nurse.

Case VII.—Occurred in the mother of the case just related. While the child was suffering from the active symptoms of the disease his mother had full care of him, and to quiet him she used to carry him with his head resting on her arm. At a spot on the mother's arm which came in contact with an ulceration on the child's head a hard indurated chancre appeared, which was followed by all the later symptoms.

Case VIII.—A woman came to the clinic on account of a deep ulcerating process on the side of the nose and a maculopapular eruption over the body. She had assisted in taking care of a sick infant who had a number of sores on the face and body, which were undoubtedly syphilitic in character; and as the woman presented no primary lesion in any other part of the body, it was concluded that the initial infection was on the nose. conveyed there by actual contact of the child or through the patient's fingers, for she was not careful to wash her hands after dressing or handling the infant.

The form of syphilis insontium particularly interesting to the medical profession is that in which the medium is through various forms of bodily service, for in our daily work we are in constant risk of infection from contact with syphilitic patients.

I have in my notes histories of three physicians and one dentist who became infected during clinical examinations and work upon syphilitic patients.

Physicians and dentists often serve as the medium in carrying the infection from one patient to another. In the following case the specific lesion followed an injury from a dental forceps:

Case IX.—In the act of extracting a tooth the forceps slipped, cutting the lip. In about three weeks the glands in the immediate vicinity became enlarged, followed by general adenopathy and a squamous syphilitic eruption. The dentist remembered that just previous to the young lady's visit he had drawn a tooth for a patient with mucous patches on his tongue, and although the forceps had been washed, there must have been enough virus remaining to infect the wound, for the strictest search failed to reveal any other possible source of contagion.

From the few cases herein related, and the many others recorded by various writers, it will be seen that syphilis should not be classed entirely as a venereal disease, nor should the sufferer always be looked upon as a transgressor. We, as the protectors of public health, should be on the outlook for means of prophylaxis as well as the cure. We are ever alert to check other contagious or infectious diseases, while, to a great extent syphilis, with its protean form, is allowed to "ride rampant through the land." Unfortunately this disease is classed among the venereal, and although physicians know there are many cases innocently acquired, the majority of them seem to be willing to allow matters to take their course, possibly evincing regret that the innocent should suffer for the vicious. At some of our public hospitals the victim of syphilis, no matter how it was acquired, is denied admission, and even medicine, unless he is able to pay for it. This seems wrong, for to the physician disease should be disease, and the poor sufferer from this common malady should command as careful attention and kindly charity as he who is affected with any other sickness. A great amount of public good could be obtained if we could do something to restrict the spread of syphilis similar to what is being done in cases of other contagious and infectious diseases. Our boards of health are expected to carefully inspect and isolate all cases of small-pox, leprosy, and the like, but no such regulation is required regarding syphilis, a disease more infectious than leprosy. Our immigration health officers send back patients suffering from favus, while, as far as it is known, the syphilite is allowed to land. What we as medical men could do is, first, to allow the free admission of venereal patients to our hospitals and their detention there until all danger of infection is past; second, to procure some legislative act, whereby the immigration authorities would be empowered to return, or at least detain, any immigrant suffering from syphilis; third, the local boards of health should have authority to inspect every factory, shop, or place where many people are working together, and if any syphilis is found it should have power to compel the proper isolation and treatment of the case. If it were possible to have such laws, the initial lesion of this ancient disease would be less frequently observed, and the physician of future ages would have a stronger and healthier race to administer to.

SYPHILIS AS SEEN THROUGH THE NERVOUS SYSTEM.

BY C. F. BARBER, M.D.

Read before the Medical Society of the County of Kings, October 17, 1893.

Certain poisons have an elective affinity for attacking certain structures, and the effect of syphilitic virus upon the nervous system forms no exception to this rule.

It does not, perhaps, show such marked or clear-cut manifestations, peculiar to itself, when exerting its influence upon the system referred to, as it does when attacking some less resisting structure. Its slow and decided progress is, however, most astonishingly marked. At the present day it is not always recognized early when its inroads are made upon the nervous organization, for the reason that its early symptomatology is not clearly defined or understood. In the first place, it is by no means an easy matter to obtain a syphilitic history, some patients purposely avoiding the truth when questioned in that direction, others unintentionally denying any such history. We have, however, in many cases the symptoms in general, our knowledge of the manifestations in clear and well-defined cases for comparison and the result of treatment. The latter, I am forced to admit, is our only way of reaching a diagnosis in many masked cases.

Syphilis of the nervous system may be congenital or acquired. It will best suit our purpose to first consider the congenital type, and if time permits, review the better understood form, the acquired.

Comparatively little comes to us in the way of literature relative to congenital syphilis of the nervous system. We are obliged to rely upon our own observations and to cull from articles under titles as varying as the number of papers, the histories and opinions of the few writers upon this subject.

A child born of syphilitic parents can hardly be expected to escape the effects of the disease. True, it may not show its virulency through the nervous system, but a few statistics taken from Theo. Rumpf's work, "Die Syphilitischen Erkrankungen des Nervensystems," will show to a limited degree what the results of positive observation are so far as the nervous system is concerned. Forty-two syphilitic couples (one or both syphilitic) Rumpf had exact knowledge of; fourteen were without children or any suspicion of pregnancy. The remaining twenty-eight all had children. In thirteen cases syphilis was not recognizable in the offsprings. In fifteen families there occurred seventy pregnancies; thirty-two children were born dead before term; seventeen in the first month after birth, part in convulsions, one died at the age of three years of inflammation of the brain; the remaining twenty are still alive. In two of these twenty, syphilitic disease of the nervous system is apparent. Seven of these twenty died of diseases affecting their nervous structures. This is but the observation of one inquiring mind; undoubtedly many of us can add a few cases and bring the statistics to a more prominent and substantial position.

Where there is a predisposition to neurotic troubles, syphilis will materially aid in developing such a diseased condition.

In children who are able to express their feelings, headache, persistent or intermittent, often accompanied with dizziness, is complained of. Younger children are wakeful and some have convulsions. By many it is believed that the reported recoveries from tubercular meningitis are not cases of tuberculosis, but of syphilis. I can recall one case, that of a child of tender years, which had always been more or less ill, who suddenly developed what was supposed to be a case of tubercular meningitis. The case lingered along under varying lines of treatment, with no improvement; it was finally placed upon large and increasing doses of pot. iod. Much to the astonishment of its medical attendant it began to improve, and is, I believe, alive to-day. Its mental faculties are not of the best. The mother had miscarried previous to the birth of this child and her other baby is anything but a healthy looking infant, having the face, among other characteristics, which you are all familiar with. While no positive history of syphilis could be obtained from either parent it would not be imagining a great deal to believe the father a syphilitic.

A general indefiniteness of symptoms and slowness of progression should arouse suspicion, especially if the absence of pulse retardation or the presence of any characteristic symptoms indicate the vault rather than the base of the cranium is involved, is what H. C. Wood calls especially to our attention in his work on syphilis of the nervous system, 1889, p. 15.

The case I cited had many of the characteristics just referred to.

Fournier is of the opinion that a differential diagnosis may be made between tubercular meningitis and syphilitic meningitis. To substantiate this hypothesis he says: "In cerebral syphilis there is no fever, in tubercular meningitis the rise of temperature commences with the invasion of disease and undergoes curious and almost characteristic oscillations."

Symptoms, such as sudden alterations between redness and pallor of the face, the retraction of the abdominal wall, the variation in the pulse rate, a raised temperature with a pulse of normal or diminished rapidity, are not seen in cerebral syphilis.

Hydrocephalus is by Sandoz, M. Armund Ruffer (in *Brain*, Part 2, 1890), E. Mendel, and Fournier believed to be caused in many cases by an hereditary syphilis. Each cite cases to substantiate their belief.

Epilepsy, a most prevalent trouble, is well established in the new born of some unfortunates. Gowers, in his work, "Epilepsy and Other Chronic Convulsive Diseases," 1881, states, in referring to syphilitic troubles, that in his experience two cases of this convulsive disease were congenital.

With this brief review of this most important subject, it is fully apparent that we should ever be on our guard and with care and precision weigh well the symptoms of the new born and not neglect to consider the individuality of the parents.

Stepping into the realm of childhood, we may pick the thread up where we have just dropped it, and reason if epilepsy be apparent in earliest infancy there is nothing strange to see it cropping up at a little later period of life from an inherited syphilitic taint.

In the majority of cases of syphilitic epilepsy the epiletic seizures do not become apparent until the period of childhood is reached. Gowers cites eight cases in his work already referred to, of well marked epilepsy due to inherited syphilis. None of these cases differs essentially in symptoms from cases of idiopathic epilepsy.

Fournier, in one of his articles upon this subject, holds to the theory, that there is a difference in the symptoms of idiopathic epilepsy and epilepsy caused by inherited syphilis. The latter he claims has associated with the convulsive attacks pain in the head and symptoms of a congestive order, such as buzzing in the ears, sudden and passing obstruction of vision, dizziness and modifications in habits and character, and failure in intellect. While we all undoubtedly respect the views of this authority, we can but differ with him in regard to his differentiation. Whether syphilitic or non-syphilitic, the same changes are seen to occur. It would indeed be an exceedingly fine point to diagnose from observing the seizure or the general appearance of the patient whether or not the attacks were due to syphilis. Those of us who are more or less interested in this line of special work do now and then see a case which answers Fournier's description and does improve under the administration of iod. pot. Several cases which I had good and sufficient reasons to believe were of syphilitic origin have done about as badly as they well could have done under the line of treatment appropriate for such cases.

Hemiplegia and paraplegia have been and are found in children where an explanation for the same could not be given and the symptoms all clear up under anti-syphilitic treatment. Such cases are reported as syphilitic forms of paralysis. While we are obliged to admit that such cases are rare, it is nevertheless a fact and should be considered when children are brought to us suffering from either of the forms of paralysis mentioned. It is always well to bear in mind that there are no symptoms pathognomonic of syphilis of the nervous system.

Chorea is by some believed to be caused in certain instances by hereditary syphilis ; this theory, for I believe it to be more theory than anything else, I am not prepared to admit. Of a great number of cases of chorea seen and treated by me I have not as yet seen any which I could with any feeling of assurance ascribe to syphilis.

The deplorable condition which we are pleased to called idiocy and imbecility are by excellent observers attributed to inherited syphilis. Among the foremost advocates of this theory is Fournier. He has seen five cases which he feels sufficient confidence in to place on record as being cases of impaired cerebral development due to inherited syphilis. The causes for this condition are so varied that to be able in any instance to particularly specify this or that as the identical cause is purely theoretical and has little actual value. In the opinion of the writer, while he does not doubt the contributing influence of syphilis in these cases, still, from observing a number of such instances, he is of the belief that syphilis is too easily assigned as a causative factor for cerebral impairment. In an endeavor to accomplish something in that direction I attempted to examine some of the thirty or forty imbeciles under my care. As many of them are foundlings and the parents of the remainder so far below par in intellect you can imagine my success.

In turning the search light of investigation upon those of mature years we are confronted with a wide range of troubles which history and experience have placed on record as arising from syphilis.

Just which one is of the greatest importance or which is of the most frequent occurrence is a difficult matter to state. Be that as it may, the troubles arising from the toxic principles of syphilitic virus in the adult are not a few, and their recognition is far easier than in infancy or childhood. Syphilis of the brain, spinal cord, of the nerves themselves, of the terminal filaments, and of the coverings of these structures is demonstrable at our clinics or in our hospital wards daily. We will accordingly glance at some of the diseases which invade the structures just referred to and endeavor to approve or disapprove the etiology claimed for them.

Cerebral syphilis is undoubtedly the most familiar type of a syphilitic manifestation of the nervous system which we are called upon to care for. Its most prominent symptoms—headache, vertigo, aphasia, motor paralysis, derangements of vision and of the organ of hearing—are familiar to all. The following case came to my clinic at the Brooklyn Central Dispensary during the summer of 1891 : A female, age forty-five years, of robust build. The patient sought relief for an impaired vision, which to her mind was the cause of all her trouble. After falling into the hands of several of the staff she was finally sent to my room, "Diseases of the Nervous System." Patient stated that she was married, her present husband being her second, and that she had always been healthy until a few months previous to her present visit to the dispensary. The first symptom to attract her attention was a more or less persistent headache, more severe at night than at other times ; a difficulty in walking, which upon investigation was found to be due not to any act of locomotion, but to an existing ptosis. Gradually the muscles of the eye became involved and a marked strabismus was manifest. Her speech was interfered with to the extent of a partial paralysis of the muscles of the tongue. These symptoms were all that were apparent at the time of her visit to my clinic. She passed from observation for an interval of time, when suddenly there developed an alarming condition and I was summoned to the patient's home. I found her in bed apparently unconscious, but by persuasive measures she aroused sufficiently to answer a few questions in an intelligent manner, relapsing into her former condition immediately upon being left to herself. There was complete hemiplegia of the right side, with an aggravation of all her former symptoms. Her present condition had not come on suddenly, but by gradual advancement. From her past history and what I now saw I felt very confident in my own mind that the condition was one of a cerebral syphilitic lesion and treated her accordingly, under which treatment I saw my patient improve sufficient to walk, talk, and most of her troublesome symptoms gradually fade away. Before the case passed from observation I learned that the husband of the patient was a careless, good-for-nothing fellow and was a sufferer from venereal disorders of varying hues.

Cases similar to this one are not infrequent, and to encounter them complicated with epileptiform seizures is not rare. I will not take your time to quote another case, that of a gentlemam whom I know had his initial lesion some years ago and who suddenly lost consciousness while at his business in New York, had some convulsions and became hemiplegic, all of which cleared readily under appropriate treatment. If this man neglects to take his iod. pot. he is most certain to have a return of some of his troubles. I have seen him aphasic, partially paralyzed and with other trivial neurotic troubles, all yielding to anti-syphilitic treatment. There no doubt existed in both of these cases a gumma, with a possible infiltration into the substance of the cerebrum of syphilitic material. Gummata are usually developed between the laminæ of the dura mater and vary in size from a large sized coffee-bean to a growth equal in size to half a large orange. I recall a gumma which was found post mortem and measured four inches in its long diameter, two and a half in its transverse, and about one and a half in thickness. When a gumma develops in the sub-arachnoid space it speedily invades the nervous tissue and blood-vessels which surround it and presses the pia mater into the substance of the brain. These neoplasms are sometimes diffuse and sometimes circumscribed, the latter condition usually prevailing. Syphilomata of the nervous centre have a special predilection for two intra-cranial situations—the dura mater and sub-arachnoid space.

Epilepsy, which I have referred to in the early part of this paper, is by all careful observers conceded to be caused in some instances by syphilis. The cases which develop late in life are to my mind more especially examples of this form of epilepsy.

Acquired insanity is and always will be a product of a diseased system. The following case will illustrate my point and for the same I am indebted to Doctor Thomas Wells, of this city. Mary B., age twenty-six years, married, housewife, common-school education. Admitted to sanitarium April 16, 1890. At the time of her admission she was a typical case of general paresis of the insane, having about all the symptoms which go to make up the full complement of this disorder—speech affected, stuttering and hesitancy, tremor of the muscles of the mouth, loss of memory, dirty habits as to her clothing, and the delusions of grandeur. The patient lived until May 27, 1891. I may mention just here that the patient's mother was at one time the subject of chronic delusional insanity, but was not insane at the time of the birth of this daughter. The husband of the patient whose history I am citing contracted syphilis about three years previous to his marriage. He supposed himself cured. After three months of married life had passed, Mrs. B. gave evidence of syphilitic infection by the appearance of the eruption, etc. She was placed under treatment, but became insane six months after contracting syphilis. I do not wish to have it understood the insanity would not have resulted, syphilis or no syphilis, but it is my firm belief that she would not have been the victim of so grave a disorder at such an early stage of life had she not contracted syphilis as she did. In other words, I believe syphilis to have been the exciting cause of a trouble which existed in a subject predisposed to mental disease. These cases are not common, but the few which have been reported fairly well coincide so as to warrant a class by themselves. In brief, they run a much more rapid course than the usual forms of paralysis of the insane, their symptoms maturing much more rapidly, and the three stages of the disease running closer together than in the commoner forms of this disease.

Acute meningitis, by some ascribed to syphilis, is absolutely disputed by equal authority. Chronic meningitis, on the other hand, is most universally believed to be of specific origin. Few dissenting voices do we find to this. Gowers considers it "the surest fact in medicine." That syphilitic poison attacks the blood-vessels of the brain I can vouch for, and by so doing produces changes which are in many cases irreparable. In 1863 Weeks demonstrated the fact that an arthritis of the vessels of the brain existed in some cases which he had made post-mortems upon. Later, Hughlings Jackson corroborated this view. Thrombosis and softening are the results of this diseased condition.

An apoplexy may also result from this breaking down of the arterial walls, as I think the following case will illustrate: A Chinaman about forty years of age was treated for the initial lesion of syphilis some few years ago, and after having the primary sore healed he passed from view until a syphilitic rheumatism again brought him to the hospital. While an inmate of the hospital he suddenly fell to the floor and after a convulsive seizure he was found to be hemiplegic; the paralysis existing on the left side. Whether this was the side first convulsed or not the bystanders are unable to say. A few days following the seizure he had another convulsion, but has had none since. In this case large doses of the iod. was administered and within a few weeks the patient began to show signs of improvement. Motion and sensation returned to the affected side—motion to a limited extent, sensation to an almost normal degree. After a rally for a number of weeks he became ill from causes foreign to his original disease and died. At the post-mortem examination there was revealed the point of hæmorrhage with an area of broken-down cerebral tissue. He was syphilitic beyond a shadow of doubt, for deposits of syphilitic material were found throughout his body, lungs, and liver. This was a typical case of syphilitic diseased blood-vessels, with the result we may ofttimes look for.

The dangers arising from this diseased condition of the arteries of the brain can easily be imagined: thrombosis, embolism and apoplexy with their grave results are most prominent. Hammond, the elder, says these results can be averted if treatment is faithfully carried out.

Heubner describes a lesion which I have never seen. It is a condition found in the arteries and is seated under the inner coat of the vessels, between the endotheliun and the fenestrated membrane. This is a rare condition.

This authority denies the possibility of a syphilitic encephalitis, (Die luetische erkrankung der Hirnarteum, Leipsic, 1874).

In turning to syphilitic lesions of the cord we find that about the same conditions are to be found as we have reviewed in the brain and membranes, only the lesions are not so frequent. This statement refers more especially to new formations. Neoplasms are most frequently found on the periphery of the cord rather than in the substance, in the arachnoid space. and on the internal face of the dura mater. These new growths are not always well-defined tissue, but analogous to gummata, diffused through the tissue.

Engelsted has reported a case (Arch. des Heilkund, Band, iv., 1863, p. 169) where he found little miliary nodosities disseminated throughout the meninges. Virchow some time since reported a case in which he found the dura mater of the cord thickened and adherent to the wall of the canal by a great quantity of tough connective tissue. Symptoms accompanying this condition were painful rigidity of the muscles of the neck and arms which superseded on paralysis of upper extremities.

This may have been a form of hypertrophic pachymeningitis. The following case will illustrate this form of disease and explain sufficient to place this trouble clearly in your minds:

Mr. Magnus, a native of the West Indies, forty-two years of age, a bookkeeper by occupation, and a man of excellent health until two or three years ago (so stated by himself). He denies syphilis. About two or three years ago (the exact date is uncertain) the patient says he had an attack of numbness with a pricking sensation in the right leg. There was no swelling at this time. He was inconvenienced but two days, when the trouble disappeared. A physician who saw him then assigned rheumatism as the cause of his illness. About eight weeks ago (March, '93) the present attack began. Two weeks before this illness made itself manifest the patient fell upon the ice. He had undergone considerable fatigue in a business way previous to present attack.

A pricking sensation was noticed in the right hand and fingers, followed by a feeling of shakiness in his leg when standing or walking. For a day or two he was unable to walk at all. This grave condition passed rapidly away. A feeling of heaviness and a renewal of the old tingling symptoms in the legs, also in left hand and leg, not as great as in the other two members. Unsteadiness in his gait occurred at this time, but only lasted two weeks. Sensation in the hands continued. Swelling and puffiness greater in the right hand than at other points. A sensation of painful burning, worse when the fingers were touched, existed to an annoying degree. A feeling of constriction about the chest occurred two days after the onset of this, the second, attack. This sensation persisted for a number of days, then disappeared almost as suddenly as it came. The puffiness and swelling never extended above the wrists.

When the patient presented himself at the clinic for treatment his right hand was swollen and puffy, especially at base of fingers and through some of the fingers themselves. The skin of the fingers was glossy. Some wasting of the muscles was apparent in the hand and forearm, but to a moderate degree only ; the left member the same as the right, with but a shade different in degree of wasting.

At this examination he was unable to pick up any small article, such as a pin or pencil, without great difficulty. The buttoning and unbuttoning of his clothing was a source of great annoyance to him, as he could not manage the movements necessary to accomplish this act. Heart and other organs normal.

Tendon reflex marked, probably exaggerated. Tactile sensations normal.

This patient presents symptoms which are quite typical of the disease described by Charcot, and undoubtedly is a case of hypertrophic pachymeningitis of the cervical region, and although he denies a syphilitic infection, I am of the opinion that the causation can be better explained by that method of reasoning than by any other. He has been under appropriate treatment for a number of weeks and the result is encouraging, as he is able to move with much dexterity the affected parts.

In the time at my disposal it is impossible to consider at any length all the diseases of the spinal system in which syphilis figures as a cause. I will accordingly be obliged to but mention some of them, leaving the more intrinsic facts for you to peruse at your convenience.

Erb, in speaking of spinal paralysis (Neurolog. Centralb., No. 6, 1892), maintains that the spinal manifestations in subjects of syphilis possess sufficiently marked features to make a special morbid entity, though having much resemblance to the spastic paralysis so far as the various movements of the legs are concerned and the exaggeration of the tendon reflexes. Muscular spasms are, however, relatively little marked, while bladder function is almost always affected.

The symptoms are of slow development and progress and even years may pass before they are all present. They consist in paresthesia, transient pains, fatigue easily brought on, stiffness and weakness of the legs and paralysis of the bladder, the latter existing as a sole symptom, perhaps, for years even. Spasmodic paralysis of the legs may follow, but rarely complete paraplegia. The patient moves about slowly, the legs are stiff and progression is painful, as though there were a combination of intense muscular spasm along with the paresis. Sexual power is diminished in most cases. There is a decided tendency to improve, especially under energetic treatment.

Erb claims that bearing these symptoms in mind he is able to make a diagnosis without going into the history of the case, so far as the syphilitic portion is concerned.

In cases of syphilitic patients where we have been able to obtain a post-mortem examination, symptoms of spinal lesions having been present previous to death, we have found a simple softening of the cord; while on the other hand, so far as my knowledge goes, there has never as yet been any positive proof that a pure myelitis has ever been developed through the influence of syphilis. Syphilitic affections of the spinal system do not occur at an early stage of the disease; on the contrary, they make their appearance only after the disease is well advanced. The symptoms are more or less constant and according to the most careful observers are pain localized in the spine, or radiating to the limbs with derangements of sensibility, fornication, numbness and anæsthesia, rigidity of muscles succeeded by temporary contractures and movements which gradually lose their energy and are ofttimes accompanied by painful cramps. All these symptoms give way as the disease advances to paralysis, usually beginning in the lower extremities, advancing with rapidity. Paralysis of sensibility does not keep pace with paralysis of motion. It is needless to add that the location of the lesion has much to do with the symptoms. There is ofttimes a manifestation of syphilitic infection where the interior of the cord is involved, the disease commencing at the motor nerve roots. Chronic muscular atrophy due to degeneration of the motor cells, with or without signs of lateral sclerosis, is an example sufficient to illustrate this fact.

The spinal nerves themselves suffer but rarely from syphilitic invasion and if at all it is in consequence of damage to their roots.

Insular myelitis, or as many prefer to term it, insular sclerosis, is ofttimes referred to as one of the many diseases of the nervous system attacked by syphilitic virus. As it is far from being a common disease at the best we can only refer to it and not stop to question the authority for placing it in the class now under consideration.

As I have intimated, spinal nerves seem to escape the ravages of syphilitic poison, while the cranial nerves are chiefly attacked at the base of the brain, where several of them are involved in a focus of inflammation. Some of the nerves of the eyeball offer exceptions to the statement just made, as they may alone be affected by the poison. The facial nerves always present a remarkable freedom from syphilitic involvement. Nerves arising from the side of the medulla are often attacked when the system is under the influence of the virus ; especially so the hypoglossal and spinal accessory, causing palsy of the tongue, palate, vocal cord of one side. When a patient presents himself with the foregoing symptoms I would not hesitate to express an opinion that syphilis was at the bottom of the trouble.

Simple atrophy of the optic nerve, motor palsies, Argyll-Robertson pupil are all manifestations which we see and know are symptoms referable to troubles caused by the subject under consideration. These symptoms just referred to are within the category which goes to make up the great list which allows us to reach a diagnosis in the trouble known as locomotor ataxia or sclerosis of the posterior columns. This disease, as you know, has many exciting causes, but in seventy-five per cent. of *all* cases the subjects have been syphilitics. At the present time the majority of writers upon the etiology of this trouble do without a question assign syphilis as the first and foremost reason for the disease. In a number of cases under my care over fifty per cent. can be traced to a syphilitic system.

While I have not referred especially to the sensory nerves, I do not wish it inferred that they are not attacked by the virus. As the sensory disturbances usually accompany the motor troubles I leave it for you to look further into rather than take any more of your time by going especially into the subject.

That hysterias and neuralgias are the result of syphilitic infection, and especially so when the disease is active, I am a firm believer. Of the former I have a marked case in mind which occurred in the practice of my friend, R. W. Taylor, of New York. The patient was a lady who had contracted the initial sore from her husband, and within a brief period she became a most marked case of hysteria, which only yielded after a most thorough course of syphilitic treatment. I may add that previous to being placed upon the treatment she had undergone a thorough course of all other forms of treatment, her attending physician not realizing the true cause of her trouble.

Neuralgias from the subject in hand are of such common occurrence that I will but mention that such a condition can exist.

Before closing I must refer briefly to the peripheral troubles which may be provoked by syphilis. Local neuritis, especially in cranial nerves, with consecutive atrophic degeneration, also compression of nerve tract, with consequent symptoms by the development of a syphilitic neoplasm, are forms which should attract attention.

When there exists a syphilitic neoplasm of or affection of a single nerve there are accompanying, besides the usual symptoms, functional troubles of the organ supplied by the affected nerve. J. A. Jeffries (Boston, M. and S. Jour., Oct. 26 and 27, 1892), in an elaborate article states that the majority of cases of eye paralysis occur in syphilitic subjects. The following case will illustrate the points just referred to:

REPORT OF A CASE OF

Miss Mc., thirty-one years of age, at present occupied in household duties. In February 1888, patient fell upon the ice, striking heavily on her coccyx. Immediately following she suffered greatly from pain in that region. Pain was so severe that she was unable to attend to any duties; especially marked when in a standing position. This troublesome feature continued for three weeks, when it gradually diminished, until it disappeared. For a number of years previous to the accident just cited patient had noticed that her sense of smell and taste were interfered with. On testing these functions the writer found that it required the most pungent odors to elicit any response; a similar condition existed as to taste. After discovering these defects my patient stated that she had a brother who was similarly affected. Her hearing on right side is greatly impaired; cannot hear the voice unless greatly accentuated. A watch in close proximity to the ear can just be distinguished. Did not test with tuning-fork. For some time previous to her accident the patient had been in the habit of handling lead, in the form of pipe or scrap lead. This habit had existed for about ten years. She was by necessity at that time exposed to all weathers. About four months after her fall she noticed that her vision was impaired. Upon questioning her I find that the trouble was a diplopia. An internal strabismus was also present at the same time. Slight pain in region of the eye (right). She consulted two of our best eye men; one told her there was nothing for her to worry about and the other advised the use of electricity. Electricity was used, but with no result. Dr. Knapp, of New York, was then consulted, but he could offer no explanation for her condition. When seen by Dr. Knapp she could not move the eyeball at all. From this time (1888) until 1892 there seemed to be no change in her condition. In June, 1892, she suddenly realized that her vision was interfered with; could not distinguish objects. The eyelid was noticed to droop. Had sensation of pins and needles in temporal region. At present the patient's general health is good. There is complete ptosis of right eyelid, absolute paralysis of every muscle attached to or used in accommodation. The pupil remains about two-thirds dilated. She declares she can distinguish daylight from night. There is no pain at present; there is slight paralysis of right side of face. Some little atrophy is apparent. Muscles respond to stimulation by both faradism and galvanism. The pain sense seems not to be much impaired; heat and cold are readily distinguished, as are other painful sensations. To the observer's hand the afflicted side seems to be colder than the opposite. Actual temperature not taken, as a surface thermometer was not at hand. A marked depression exists in anterior temporal region. Examination of eye by ophthalmoscope shows nothing; a lachrymose condition is now present; a chronic pharyngeal catarrh now exists and has done so for some time past. Reflexes normal. Tongue clean and is protruded in a straight line.

Family history does not aid us in making a diagnosis, as there is no history of any neurotic or other inherited disease. Father died at the age of seventy-nine; mother earlier in life, suddenly, of supposed heart trouble.

The patient has while under my care been taking iod. pot. and a tonic. Thus far no effect has resulted from treatment, save an improvement in her general condition. She informs me that every one she has thus far consulted gives her the same medicine.

While I have taken more than my share of the evening, I feel that I have but just opened the subject assigned to me. If I have expressed views which shall excite discussion or be the field for future investigation, I shall have accomplished something. It is with regret that I could not have been more concise and placed more points regarding the subject in hand before you. It is a vast subject, full of pitfalls and one which I hope may be under investigation by us all.

TERTIARY SYPHILIS.

BY GEORGE DEDERIC HOLSTEN, M.D.,

Dermatologist to the Brooklyn, E. D., Hospital, Physician to the Brooklyn Throat Hospital,
Department of Dermatology.

Read before Medical Society of the County of Kings, October 17, 1893.

By tertiary syphilis we mean those manifestations of the disease characterized by the deposition of syphilitic material in the deeper portion of the skin, in mucous membrane, bone, internal organ, vascular and nervous systems, and muscles. These tertiary manifestations distinguish themselves not only clinically from all earlier manifestations by such features as asymmetry, but also by their tendency seldom if ever to resolve spontaneously, but rather to go on to progressive destruction of the tissue in which they develop, so that more or less serious consequences may result.

The essential characteristic pathological feature of tertiary syphilis is the formation of gummata which are more or less thick, knotty formed swellings of small-celled infiltration, with strong marked tendency to peripheral, eccentric enlargement. As the life of the constituent cells of the infiltrations is very limited, the oldest—the central cells and groups—soon undergo a retrogressive metamorphosis.

Histologically gummata do not in any way differ from any other syphilitic neoplasm in whatever stage of the disease they may be encountered; they are all composed of masses of granulation cells. But it is in their tendency to non-resolution and to ulceration wherein they differ from the syphilitic formations of the other stages.

It is, however, the situation of this gummatous material which becomes of importance. If in some portion of the central nervous system, or in some of the larger blood-vessels or heart, they may prove fatal to the individual; while seated in the skin, muscles, or mucous membrane they may exist for years without appreciably affecting the well-being of the individual.

Whether or not the tertiary stage is reached in every case of syphilis is and must ever remain an open question. The probabilities are that it is not.

Rollet gives fifteen per cent. of his syphilitic patients as having tertiary symptoms. Muriac also gives from fifteen to twenty per cent. Haslund out of 6,364 patients found 12.4 per cent. belonged to the tertiary period, the proportion between males and females being nearly equal, while Neumann out of 9,742 cases gives 6.82 per cent. as tertiary.

For obvious reasons, not every case of syphilis can be followed from its inception to the close of life, and even where an individual has lived for many years after the initial lesion and no symptoms beyond the secondary have developed, who shall say that tertiaries might not have appeared had the individual lived a little longer? The reported cases of Fournier where some cases developed tertiary symptoms fifty-two, fifty-four, and even fifty-five years after infection are instructive and raise the question whether syphilis is ever entirely cured, as well as point to the length of time which may elapse before such tertiary symptoms may appear.

The date of such appearance varies very much, some making their appearance as early as a few months after infection, the tertiary following closely after the secondary, and even being associated with them ; while in other cases, as before stated, not until after the lapse of many years. The greater number of tertiary affections is stated by most authorities to appear in the third or fourth year after infection, though Finger says the seventh year after infection.

It is not possible to determine beforehand in each individual case whether or not tertiary symptoms will develop. Neither the situation, extent, appearance, or duration of the initial lesion ; the severity or duration of the secondaries, or the shorter or longer persistence of glandular enlargement will assist us in this respect. But certain conditions of the individual, his habits of life, and the greater or less degree of faithfulness with which he has pursued treatment will undoubtedly influence the advent of the tertiary symptoms. The inherent tendency of the disease is toward a progressive diminution of the intensity of the virus. Nevertheless, all things being equal, the "soil" upon which the virus is inoculated will to a large extent influence the subsequent course of the disease. Besides these, conditions of chronic alcoholism, the co-existence of other chronic or infectious diseases, infection at an advanced age, conditions which diminish the power of resistance of the organism, infection imported into new localities, and idiosyncrasy or intolerance of the individual to mercury, are also important factors.

But the greatest factor in determining the appearance of tertiary symptoms, is treatment during the earlier stages. There can be no question that the want of a proper course of mercury during the secondary stage of syphilis is the most important and most frequent cause of the development of tertiary symptoms.

In the various statistical tables which have been published showing the frequency with which certain organs of the body are attacked with tertiary syphilis, much variation appears, due to the class of patients from which the statistics were taken.

Haslund, for instance, gives out of 791 cases the following percentages:

Skin,	45 per cent.
Nervous syph.,	20 "
Osseous,	18 "
Mucous mem.,	12½ "
Internal organs,	4½ "

his cases being drawn from hospital practice exclusively; while Fournier, deducting his conclusions from private practice, found the nervous system affected 1,085 times in 3,429 cases, or a little less than thirty-two per cent.

The reason, then, for this great variation of the localization of tertiary syphilis in different organs is explained in great part by the life of the individual. It may be stated in broad terms that whichever organ or tissue has the least resistance will be the first where tertiary syphilis will appear. In those engaged in manual occupations, or where any portion of the body becomes subjected to traumatism or continuous pressure, such places will be the first and perhaps the only places affected. This is seen in the frequency with which periosteal gummata of the tibia, clavicle, frontal bone, bridge of nose, and posterior border of ulna are met with in comparison to similar lesions on bones more protected. The irritation to which the tissues of the leg are subjected by venous dilatation also acts as a predisposing cause. Gummata of the tongue and cheek may frequently be referred to the irritation of carious teeth or to injuries. Injuries also are the most frequent predisposing cause of gummata of the testes, and furuncles have developed into specific ulceration. In those engaged in intellectual occupations the nervous system will be the first affected. The rôle of alcoholism in determining lesions in internal organs is an important one.

Other and previous non-syphilitic pathological conditions determine to some extent the localization of tertiary syphilitic lesions, as a previous tubercular affection of the skin, of mucous membranes or bones; the syphilitic sarcoceles following a gonorrhœal epididymitis; chorea and epilepsy in determining syphilis of the nervous system.

The lesions of the secondary stage were considered by Neumann to be produced by the action of the specific virus upon the tissue. As a result of such action these tissues became converted from a normal into a pathological condition, tertiary lesions being then produced as the result of some irritation of these pathologically altered tissues.

Neumann's examination of pieces of skin which had long before been the seat of a syphilitic eruption, and which macroscopically appeared to be perfectly normal, but on microscopical examination showed undoubted pathological changes, would favor the view that these previous attacks had either left a deposit of virus which for some unknown reason had been called into activity, or else had determined certain changes in the tissue itself, making it susceptible when irritated to the development of tertiary outbreaks. The latter view is strengthened by ofttimes finding tertiary lesions occupying the site of former primary or secondary lesions, as where gummata appear in the feebly pigmented scars of former papulo-pustular syphilide or as in the *chancre redux*.

Finger regards the tertiary stage to differ from the secondary, as being not so much syphilis as a syphilitic cachexia, or post-syphilitic disease, and he says: "I regard the third stage as a specific cachexia produced by the chronic intoxication of a syphilitic toxine." He bases his hypothesis upon these facts: The small percentage of tertiary cases; their late appearance after infection; their different clinical appearance from the earlier symptoms, and their tendency to non-resolution; that persons suffering from tertiary manifestations can be reinfected, which superinfection would not be possible were syphilis present; in the absence of contagiousness in the tertiary stage; in the reaction to iodide and mercury in the different stages; in the immunity conferred upon mothers who have borne children syphilitic through the father, the mother, however, subsequently developing tertiary symptoms.

Where secondary and tertiary lesions coexist, the former depend upon the specific microbe, the latter upon strong intoxication with the toxine generated by the specific bacilli.

These views are now being generally accepted by syphilographers.

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TREATMENT OF SYPHILIS.

BY HENRY H. MORTON, M.D.,

Dermatologist to Kings County Hospital and Long Island College Hospital Dispensary, Clinical Assistant, Genito-Urinary Department, Long Island College Hospital.

Read before Medical Society County of Kings, October 17, 1893.

In taking up for consideration the subject of the treatment of syphilis, it may be interesting to notice the results where no specific medication is given.

The experiment has been tried of watching the course of the disease, in syphilitic patients, through various stages, without administering mercury or iodide of potash. These observations demonstrated that the lesions in many of the cases showed a definite tendency to recover, but with far less rapidity than in similar cases under treatment. In others, however, the lesions did not disappear till specific treatment was begun. In the light of this experience we may say that syphilis in certain individuals is a self-limited disease, that in others it tends to become chronic, with a marked tendency to relapses, that all cases are benefited and many cured by treatment.

The specific medicinal treatment of syphilis consists in the administration of mercury or iodide of potash, depending upon the stage of the disease and the character of the lesions.

The first question which arises is, How soon should the administration of mercury be commenced? The practice has varied with different physicians, some using it as soon as the initial lesion is seen, others waiting until the secondary rash appears.

It is now known to be impossible to abort the disease by the early administration of a mercurial, and in Vienna, where cases have been treated in this way, Dr. Ehrmann states that the effect of the administration of a mercurial before the rash appears, is to postpone its appearance for weeks or months, and that it has seemed to him that cases treated in that way ran a less favorable course and were more subject to grave tertiary lesions than the others which were treated differently.

It may be stated as a general rule that the administration of mercury should not be begun until the appearance of the eruption, or at least until an absolute diagnosis of syphilis has been made.

The explanation of the curative action of mercury is still a matter of doubt. We know that in small doses it is a tonic, increasing the number of red-blood corpuscles, while in large doses it destroys them, but that fact is not sufficient to explain its action in syphilis. It is highly probable that its beneficial effects are due to its germ-destroying capabilities.

The methods of administration are numerous, depending upon the custom of the country or the necessities of the case.

Inducing a high degree of salivation intentionally and with rapidity is no longer in vogue, as, aside from the unpleasant effects of salivation, more benefit is derived from the administration of moderate doses of mercury, either continuously or intermittingly, for a number of months.

The so-called intermittent plan of treatment consists in carrying the mercurial preparation, which may be selected, to the point of toleration, as shown by slight sponginess and swelling of the gums and a coppery taste in the mouth, and continuing for two to three months. The treatment is then stopped for two months and begun again. Intermissions alternating with active treatment are kept up for from two to four years.

The preparations of mercury which may be used are the bichloride or protiodide and calomel.

The method which is most used in this country, and which seems to give the best results, besides being convenient and easily employed, is the so-called tonic treatment of Dr. Keyes. He selects the protiodide pill, beginning with three a day and increasing until griping and diarrhœa are produced. The full dose is the amount which can be given just short of producing these symptoms. The full dose is continued until the disappearance of the rash and mucous patches when it is reduced by one-half. The patient continues with this half dose unless a relapse occurs, in which case he takes his full dose till the symptoms have again disappeared; he then returns to the half dose, which he continues to the end of his treatment, unless another relapse takes place.

Medication is continued for a period varying from two and a half to three years.

Patients treated in this way are almost entirely free from the serious later lesions of bones, nerves, and viscera.

J. William White and Taylor suggest that in order to obtain the full benefit from a mercurial course, it is necessary that the gums should show the constitutional effects of the drug by slight increase of salivary flow, sponginess, and tenderness.

In some cases abnormal irritability of the intestinal tract will produce a diarrhœa and prevent the absorption of a quantity of protiodide of mercury sufficient to produce these symptoms. In other cases, although apparently well tolerated, the long-continued use of the protiodide may interfere with its proper absorption after a time. In order to obviate this, White stops his internal medication after three months and directs his patient to use inunctions for two weeks, thus giving the stomach complete rest. The treatment then alternates between inunctions and internal medication for a period of two years, after which time he uses iodide of potash.

The plan of treatment by the inunction of mercurial ointment has advantages, in certain cases, over every other method. Where a prompt and decided effect is desired, as in those instances where an important organ, the eye or brain, for example, is threatened with destruction, the disease can be controlled by inunction more quickly and surely than in any other way. In gummata of important organs it is also necessary to combine iodide of potash in large doses, even as high as 500 grains per diem, with the mercury, and the combination of the two therapeutic agents will act favorably, when either used alone would be too slow to be effective.

The remedy is applied by taking a piece of mercurial ointment of the size of a walnut and rubbing it into the skin on successive days, beginning on the first day with the flexures of the knees, on the second day the inner part of the thigh is rubbed, on the third the abdomen and breast, on the fourth the arms, and on the fifth the forearms. The patient takes a bath on the sixth day and begins with the same routine again on the seventh day.

In an ordinary case of syphilis treated in this way a sufficient number of inunctions are made to cause the disappearance of the rash, and other courses of inunction are made at intervals during the progress of the disease.

In Germany and Austria the inunction plan is the routine method of treatment for most cases of syphilis. Its chief advantage being that it acts promptly, and that the stomach is not disturbed, thus allowing the patient to assimilate the maximum quantity of food.

The mercury is deposited in the follicles of the skin and can be found in the urine for months after the inunctions have ceased. The patient is thus practically subjected to the continuous plan of mercurial treatment.

Fumigations of calomel are a useful adjunct to the internal administration of mercury and easy of application. The patient is wrapped in a blanket and seated on a cane-bottomed chair; a pan of boiling water is placed under the chair and the patient is steamed a quarter of an hour. Thirty grains of calomel are then fumigated on a tin stand over a spirit-lamp under the chair and the patient is surrounded by the fumes half an hour. Fumigation is employed once a day until the gums are touched and then once in two to four days.

It is particularly useful to supplement the internal treatment in the cases of extensive ulcerating, suppurating early lesions. In instances where I have used it, I have observed that the lesions upon the body which were exposed to the fumes were healed much more rapidly than those on the face, which, of course, were left free.

The hypodermic injection of mercury as originated by Lewin, although efficacious, is open to the objections of the pain of the needle puncture and the danger of abscess, and although used in some German clinics it has not found much favor in this country.

The administration of mercury, although carefully observed, is often attended with unpleasant consequences, the most frequent of which is salivation. This may come from a small dose, and I believe that many of these cases may be explained by a condition of functional inactivity of the liver. Griping and purging often follow the use of small doses of protiodide, and these cases will generally bear the bichloride of mercury quite well.

A certain class of patients show that their dosage is extreme by anæmia, general malaise, and debility. It is often a difficult question to decide whether this condition is due to the disease or the drug. When dependent upon the administration of mercury the dose must, of course, be lessened.

Iodide of potash is of great importance in the treatment of late lesions, as mercury in the early stages of syphilis.

Its action is to cause the absorption and disappearance of the growths made up of the small, round-celled, new formations in the form of diffuse infiltration or gummata, whether situated in the skin, bones, membranes, arteries, or viscera. It also causes to be set free any mercury which may be deposited in the tissues of the body.

The iodides have but little curative agency in the treatment of early syphilis, and even when used later in the disease it is necessary that mercury should be given either before or afterwards in order to prevent a relapse.

The dosage of iodide of potash varies from fifteen grains to two ounces per diem, and a saturated solution is a convenient form for its administration, beginning with ten to twenty grains at a dose and rapidly increasing until the lesions begin to disappear. The only rule for the size of the dose is the effect attained, and while in one individual thirty grains a day may be enough, another patient with a vital organ badly damaged may require an ounce or more continued for days until the lesion has disappeared. As already stated, the rapidity and certainty of iodides in grave visceral disease are greatly increased by using mercury at the same time, preferably by inunction.

When iodide of potash disagrees with the stomach it will be better tolerated when given in a small quantity of milk which has been coagulated by Fairchild's essence of pepsin.

Dr. Keyes has used it per rectum dissolved in beef tea, but the rectum soon becomes intolerant and rejects it. Drinking one or two goblets of warm water afterwards will sometimes enable patients to retain it, or it may be given in starch water. In cases where the idiosyncrasy is so marked that it cannot be given at all, mercury by inunction may be used or the preparation known as Zittmann's decoction, which is composed of a number of vegetable bitters and a small quantity of mercury. In certain intractable cases of syphilis which have not responded to mercury and iodides this preparation has done good service and a trial should always be made of it before pronouncing a case hopeless.

Frequent unpleasant occurrences resulting from the use of iodides are coryza and an eruption which may be acneform, erythematous, bullous, or purpuric, or a general weakness and malaise. These symptoms are less apt to occur if the kidneys eliminate well, and, indeed, it is an important point in the administration of the iodides when given in large doses to ensure an abundant secretion from the kidneys by administering diuretics if necessary. Keyes considers an increased flow of urine as an indication that the tolerance of the patient will be great and the good effects of the drug well marked.

The mixed treatment consists in the administration of mercury combined with iodide of potash in moderate doses.

It is used to produce the disappearance of the intermediary lesions of syphilis occurring six months or more after inoculation.

Many patients, especially those treated in private practice, never show any further symptoms after the disappearance of the secondary eruption, and the exhibition of iodides as a routine plan of treatment is a measure of individual preference.

J. William White states that after the second year there is an excess of cell growth and accumulation, and as stimulation of the lymphatics becomes the prime indication, iodide meets it better than any other drug. He accordingly gives iodide of potash in moderate doses for a period of six months after two years of mercurial treatment, even though no lesions are to be observed.

In the cases which present themselves for advice at hospitals, inattention to treatment and a bad condition of health are apt to lead to relapses.

The fissures and ulcerations of the mouth, scaly and tubercular eruptions, superficial ulcerations of the skin and larynx are not of the purely gummatous type calling for iodides, and yet mercury alone would be insufficient to relieve them. Under the mixed treatment they disappear with gratifying rapidity. The majority of cases when the mixed treatment is indicated, demand tonics as well, for we may consider the expression of the syphilitic poison as an indication of depreciated resisting power.

I think that in speaking of these cod-liver oil should be placed in the front rank. It is especially applicable to those patients who have become greatly reduced in weight where the indication is to improve nutrition and make fat, and cases of this character will be markedly benefited by it.

In persons in which the disease has diminished the nervous energy, and consequently the blood-making capabilities of the body, the combination of the mixed treatment with iron, arsenic, and strychnia as advised by Dr. Sherwell is most useful. Erythroxylon coca, used with mercury and iodide, is highly recommended by Dr. Taylor for its properties as a restorative of the vital powers in broken-down persons suffering with the results of the syphilitic cachexia, and as a substitute for alcohol in intemperate individuals.

As syphilis is a depressing disease, destroying the red-blood corpuscles, it is highly important to place our patient in the best hygienic surroundings in order that he may successfully cope with its debilitating effects.

The condition of food, dwellings, work, clothing, tobacco, and stimulants should be inquired into and appropriate advice given.

The state of the mouth should be carefully looked after before beginning a mercurial course. Teeth with caries, irregular edges, and deposits of tartar about the roots will show evidences of ptyalism much sooner than if they were in a healthy condition.

With regard to the question of climate it has been observed, particularly in the case of sailors, that patients do better in a warm than in a cold climate.

The hot springs of Arkansas have acquired a good deal of renown in the treatment of cases of syphilis, both recent and old.

The water, which contains but a small proprotion of mineral substance, has the peculiarity of having a temperature of 140° as it comes from the earth, and has no direct influence upon the disease.

Patients while drinking it, through its diuretic and diaphoretic action, are enabled to tolerate larger doses of mercury and iodides, and cases of inveterate syphilis who go there are benefited because their tolerance is increased, whereas if they remained at home they could not take sufficiently large doses to control their symptoms.

The local treatment of syphilides as a rule is not necessary, since internal medication will cause their disappearance. This will be materially hastened in many cases by the application of a mercurial ointment or plaster and is particularly desirable in lesions situated upon the face. The preparations used for this purpose are the white precipitate, blue ointment, oleate of mercury, and mercurial plaster. The mercurial plaster, as used by Pick and modified by Klotz, consists of equal parts of mercurial plaster and the compound soap plaster, containing Diachylon ointment and soap plaster of each forty parts, vaseline fifteen parts, and salicylic acid five parts, and is a very convenient local application for all the syphilides.

In certain cases of long-standing and obstinate tubercular or ulcerative lesions, internal treatment is greatly aided by local applications.

Moist papules should be kept dry with a dusting powder of calomel and covered with absorbent cotton.

A patient with ulcers of the mouth should use a mouth wash of chlorate of potash, myrrh, and carbolic acid, or the ordinary black wash consisting of calomel and lime water, as suggested by Harrison Allen, has worked well in my hands. In addition the ulcers should be touched with acid nitrate of mercury or nitrate of silver.

Old ulcers of the leg which do not heal under the use of iodides in excess, or the mixed treatment, may need curetting, strapping, incision of the edges, or the application of balsam Peru in combination with a local mercurial.

The initial lesion or chancre requires but little treatment aside from cleanliness. An absorbent powder of calomel, aristol, or iodoform is usually sufficient.

In cases where the induration is excessive its absorption is hastened by the mercurial plaster, but more or less induration usually remains until the patient has been subjected to internal mercurial treatment for some time.

Discussion on Syphilis.

Dr. H. W. Rand:—The evening has been so fully and so well occupied that I shall say very litttle in the way of discussion. I would like, however, to emphasize the importance of early diagnosis in cases of syphilis, perhaps more so than has already been emphasized by the papers of the evening; not only because a syphilitic patient is a source of danger to those around him, but because I am one of those who believe in the administration of mercury at the earliest possible period in the history of the disease. Where a patient presents himself with a history of exposure two weeks or more prior to the appearance of a lesion, where that lesion, not having been cauterized or irritated in any other way, soon acquires a typical induration, and where it is soon followed by induration of the adjoining lymphatic glands—that painless, indolent enlargement so well known to those who have seen many of these cases—a diagnosis of syphilis can be made with certainty, and in these cases, as I said before, I believe in the administration of a mercurial at once, but in moderate doses.

We unfortunately meet with many cases that are not typical, and here while early treatment is just as important, the question of certainty is of greater moment to the patient, and in this class of cases we must of necessity wait until the diagnosis can be determined. Where confrontation is possible in these cases, the diagnosis may be settled in that way.

If syphilis is due to a micro-organism, as we have reason to believe, and if mercury acts by antagonizing the growth and multiplication of such micro-organisms in the system, then certainly the earlier we can submit our patient to the mercurial course the better.

Experience based upon hospital and dispensary practice, and many of our statistics are founded on that, is not always reliable. That which is most valuable is gained by observation of the better class of private patients, extending over a period of years. In those cases in which I have begun the exhibition of moderate doses of mercury as soon as the diagnosis of chancre has been made, they have invariably done better, had fewer lesions, and the disease has been far milder and more manageable than in those cases in which the administration of the drug has of necessity been delayed until some secondary manifestation occurred to render the diagnosis certain.

I do not know as Dr. Morton spoke of the iodide of calcium as a substitute for iodide of potassium. I have used it during the last year in somewhat smaller doses than the potassium, and with excellent results, especially in strumous subjects, where the calcium seems to be much more serviceable than potassium. The chloride of gold and soda, where the mercury is not borne, has often been productive of good.

In regard to prognosis, we cannot say to any case, however faithful he may be as to treatment, that he will have no subsequent development. We can say that the majority of fairly healthy subjects who take a proper course of specific and, perhaps, tonic medication extending over a period of two or two and a half years—and in severe cases somewhat longer—will not only be capable later of procreating healthy children, but will be free thereafter from any serious manifestation of the disease.

In regard to the dosage of a mercurial, I have never found it necessary to produce its specific effects upon the gums except in those cases where some vital organ, as the brain, or some other important organ, as the eye, is threatened. In these cases I believe we are not only justified but called upon to give mercury to the point of toleration, not to salivation, but to the point of producing sponginess of the gums. I believe in all other cases the best results are obtained by a long-continued administration of what may be called a tonic dose.

The tannate of mercury has not received the attention it deserves. It will be tolerated in many cases where the protiodide and bichloride disagree, and I think it is one of our useful remedies. It will salivate, contrary to what was claimed for it when it was first introduced, but withal it has seemed to be a manageable and useful preparation.

Dr. William Browning:—The mass of matter presented is so great that what little I have to say will bear reference to Dr. Barber's very elaborate and admirable paper. He speaks in the early part of it of congenital syphilis of the nervous system. As the field of acquired syphilis of the nervous system has been thrashed very freely in the last few years, and our present knowledge is of recent origin, it follows that the congenital has not been touched much upon, and so any additional cases are of great interest.

There is a matter of experience with syphilis of the nervous system that many have met and have noted, and that is the tendency of cases—not only of distinct syphilitic gummata, or arterial disease, but also of post-syphilitic disease, such as spinal tabes—to respond temporarily to treatment. You think you have almost obtained a cure, or it is right before you, when the case suddenly begins to get worse, and despite anything you can do its course cannot be arrested. Two or three explanations of this are offered, but they are not entirely satisfactory. One is that the syphilitic disease breaks out afresh despite your treatment, which may apply in a few cases; and another is in the general line of Gowers' argument, that the cicatrix resulting from the cure of the specific lesion contracts latterly and produces in its turn destruction that cannot be remedied. Certain tissues are absolutely destroyed in the first place, and in the second place the cicatrix slowly contracts and injures other tissues as well.

In the treatment of syphilis of the nervous system, more especially of the brain, we have to resort, perhaps oftener than in syphilis in other parts of the body, to physiological as well as specific remedies. In the case of the brain perhaps the best examples of that is arterial disease. In that case it is important, if an early diagnosis can be made, and it generally can be, to dilate the arteries physiologically by giving preferably some one of the nitrites and keeping up that action while the specific remedies are taking their effect. If you do that you can frequently save the brain from the destruction that would otherwise occur.

Another line which has interested me much is the complication of syphilis with other constitutional conditions. First, typhoid fever. In that case you will see the syphilis for the time being disappear, at least in the secondary stage the lesions all disappear and only return when the patient is convalescent from the typhoid fever. Some weeks after the typhoid trouble is past they reappear and run about the same course as they otherwise would have done.

Further complication is with malarial fever, where both run their course together, each made more intractable by the presence of the other.

Another complication is with gout or rheumatic gout, and still another, at times very difficult to manage, is the complication of lead-poisoning. You might imagine that the iodide of potassium being given so largely to remove the lead from the system would be exactly in place for each and you could hit both birds with one stone. But in practice the one effect seems to interfere with the other. The experience in a few rare cases that have been observed is that sometimes the lead is stored up in the system and when you give iodide you simply set it loose and get no curative effect on the syphilis. In this case it is not known, except rarely, where the lead is stored up. It has been observed post-mortem in the intestinal tract, probably as sulphide of lead deposited on the walls, and if you give the iodide you simply tend to dissolve it and throw it into the system and make your patient worse. In these same cases of plumbism, mercury is not well tolerated, I suppose because the patient is saturated with one metal (lead) and the body does not tolerate the other metal (mercury).

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EDITORIAL.

VARIOLIN VS. VACCINE.

A wide-awake public-school principal of Brooklyn has succeeded in directing the attention of the authorities to a matter of vital importance to the 100,000 children who attend the public schools of that city.

In 1885, the Board of Education made a rule that a child could not be admitted to any school under their charge unless there was presented to the principal a physician's certificate that he or she had been satisfactorily vaccinated or had had the small-pox. The principal to whom we refer received a certificate that a certain child had "been protected from the infection of small-pox by the homœopathic administration of variolin in a highly potential state." Questioning the conformity of this certificate with that which the Board had adopted, he asked for instructions. It is, perhaps, needless to say that the Board made no modification in its requirement for entrance.

The agitation of this subject in the public press has brought to light some very interesting facts. The first and foremost of these is that the physician who gave the rejected certificate states that she has given twenty-five similar certificates, and that they have all been accepted. Another physician states that he has given fifty certificates of the same kind, none of which has been refused. He further states that one of the principals, to whom one of these certificates was presented, told him that inasmuch as the treatment with variolin was practically vaccination, it would, perhaps, avoid trouble if he in future signed the regular blank to the effect that the child had been properly vaccinated, and that he had acted upon this suggestion.

A firm believer in this method of protection against small-pox states that it consists in "homœopathic variolation by a high potency (900 centesimal) of the small-pox poison given in a dozen pellets for three successive nights." The veteran sanitarian, Dr. A. N. Bell, says that "he would as soon think of prescribing toe-nails for ingrowing nails as to give variolin as a preventive of small-pox."

It is evident from the action of the Homœopathic Society of Kings County that the use of variolin in the place of vaccine is not accepted by that body. At a recent meeting, the members placed on record the opinion that the use of variolin internally administered to protect or modify the poison, variola, "is not necessarily allied to homœopathic medicine." We are informed by one of the leading homœopathic physicians of this city, that the great majority of the members of that school of practice employ vaccination, and that the number of those who do not, but who prescribe variolin in its stead, is exceedingly small.

We presume that in view of the statements of physicians that at the least seventy-five children have been admitted to the public schools on "variolin" certificates, the Board of Education will cause an inquiry to be made into the facts.

NECESSITY FOR REVACCINATION.

The agitation of the variolin question has again brought from obscurity the enemies of vaccination, who, either from perverseness or because of an unwillingness to carefully examine into the facts, still insist upon its inefficiency as a preventive and its danger as an operation. It is fortunate for the welfare of the human race that these men are so few in every community and exercise so little influence.

The righteous indignation that from time to time creeps out, that in this land of liberty every one who wishes the privilege of having small-pox and of giving it to his neighbors should not have the opportunity, and that any authority should dare exercise any control over the matter, is very beautiful to behold; but those who are willing for the public good to submit to measures which so largely tend to prolong life and diminish suffering can not but be amused at these fruitless ebullitions.

To the believers in vaccination it is encouraging to recall from time to time some of the benefits that have accrued from its practice. Since 1885 the Prussian army has had but one death from small-pox, although from its enormous size and the exposure to which it is subjected many deaths might occur and still the protective influence of vaccination not be disproved. That this immunity is not due to the non-prevalence of small-pox in Europe is shown by the fact that in the Austrian army the mortality from this cause is considerable.

The lesson which is to be drawn from the experience of Germany, not alone in its army but also among its other citizens, is, that to enjoy this immunity revaccination is to be as carefully attended to as was the primary vaccination. The law of 1874 requires that every infant must be vaccinated, and that when the age of twelve years is reached, every child in every school, whether public or private, must be revaccinated.

The attention of the physicians of Brooklyn is at this time especially called to the necessity of advising revaccination to their clients. 449 cases of small-pox during 1893, and 23 in the first twelve days of January, 1894, should warn us of the dangers to which we are exposed.

BOARD OF EDUCATION.

Mayor Schieren has appointed Dr. J. J. Colgan a member of the Board of Education for the term expiring July, 1895.

In a membership of forty-five, the representation from the medical profession is seven: Drs. R. A. Black, J. J. Colgan, A. J. Dower, J. Harrigan, A. R. Jarrett, H. C. McLean, and J. H. Raymond.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The annual meeting will be held February 6–8. A very interesting programme is promised. The following papers are announced from Brooklyn: "Therapeutics of Oxygen," by A. W. Catlin; "Senile Endometritis," by A. J. C. Skene; "Pelvic Abscess," by W. B. Chase; "An Analysis of 150 Personally Observed Cases of Appendicitis," by G. R. Fowler; "A Case of Post-Peritoneal Abscess from Duodenal Ulcer," by L. S. Pilcher.

PROCEEDINGS OF SOCIETIES.

BROOKLYN SURGICAL SOCIETY.

Meeting of October 5, 1893.

PRESENTATION OF A CASE BY DR. DELATOUR, WITH DISCUSSION.

Dr. Delatour :—This is the case of a young man, a plasterer, who fell from the scaffold to the floor, striking on the shoulder. He was brought into the Norwegian Hospital. At the shoulder there was found projecting through the right deltoid muscle a sharp point of bone ; a Colles' fracture of the right forearm was also found. It was impossible without an anæsthetic to make any diagnosis, and the patient was placed under chloroform and a careful examination made, and the points of fracture were distinctly outlined to be two—one through the neck of the scapula and another through the humerus close up to the joint. There was a distinct portion movable between the two lines of fracture and crepitus could be gotten at either place. It was only with considerable traction that the humerus could be brought into position, and after it was brought into position it was easily held there. The parts were put up in plaster of Paris and the patient kept in it for three weeks. The Colles' fracture was treated with simple fixation about the wrist. The case is interesting, from the fractures at the shoulder especially, and I think the result is good.

Dr. Wight :—The case presented by Dr. Delatour is suggestive in two or three directions, but I will speak briefly of but two at present, as they suggest themselves to me.

First, I have very often remarked in cases of injury to the shoulder, especially from blows from the outside, a tendency subsequently to incurable paresis of one or more of the muscles of the shoulder. I mention this point as it suggests itself to my mind, because I want to ask a question, if anybody can suggest a treatment for these obstinate cases. I know some of them recover without any treatment whatever, but in some cases I have seen all kinds of treatments tried, without success.

The next suggestion is hardly practical and yet it is as practical as a matter of fact can be. It is that the famous surgeon, Mr.

Colles, didn't describe the fracture we call Colles' nowadays. I have taken great pains to look up his description, and if he is correct we are wrong. He says the fracture is an inch and a half above the lower articulate cavity of the radius. I have seen only a very few such fractures, and I have seen a great many fractures, and therefore I object to these fractures being called Colles' fractures. Ninety-five out of a hundred of them are within three-eighths of an inch of the lower end of the radius. I have taken the measurements of others. I have measured a great many cases. I have measured post-mortem specimens, and all the evidence that I get confirms me in that conclusion. Therefore, my suggestion is, can they be called fractures of the base of the radius. I often see in the surgical literature the use of that expression, fracture of the base of the radius. With all due respect to Mr. Colles I object to naming a fracture by his name that is not his. The case is more suggestive than all that, but that is all the time I ought to take.

Dr. Pilcher:—It must give us all very great pleasure to see so excellent a result accomplished in such a case as this is described to have been, for these cases of complicated injury to the shoulder joint are almost always attended with a great deal of disability, as has been suggested by my learned colleague who has just spoken, and the most any of us can say in connection with this particular one is an expression of approval of the methods of treatment so thoroughly employed at the outset, comprising the replacing of the bone in its place and the use of the properly applied, well-fitting apparatus which has kept it in its place. The best comment on the treatment of the case is the result which has been shown to us.

With regard to the remarks which have been made as to the nomenclature of fractures at the wrist, I am in full accord with all that has been said. Having written considerable upon the subject, I do not think that I have ever been guilty of the lapse of calling these injuries Colles' fractures, excepting when I may have spoken for the purpose of protesting against it. Fracture of the base of the radius, or, to be a little more exact, fracture of the lower extremity of the radius, is a term which I prefer. And I would do away with all the talk about Barton's fracture or Colles' fracture *et id omne genus;* neither of these surgeons had had one-tenth as much to do with the proper elucidation of the true pathology of the wrist injuries as Dupuytren and his followers of the French school. It seems to me that the surgery of the present day tends to throw aside all these ancient terms, and the adoption of more proper anatomico-pathological descriptive terms in dealing with surgical conditions of any kind, and that this tendency is highly to be commended.

Dr. Wood:—I think this case is a fair example of a most efficient method of treating fractures by early application of plaster of Paris. I know a great many surgeons hesitate a long while before putting plaster of Paris on a recent fracture. It is often most advantageous.

Dr. Figueira:—In regard to the last word that the doctor has spoken I will say this, that in my experience I remember one case when I was an interne in Bellevue Hospital, where a limb was amputated for gangrene as a result of such treatment. And in my service, in St. Catherine's Hospital, I saw a case the other day in which the patient lost his life by the use of plaster of Paris on a fresh fracture. The limb was properly padded and the patient was in good care, and yet in one night, in a few hours, it caused his death. You take a healthy patient with sound arteries and a good strong constitution, and the limb will stand it. But this was a drunken woman, and her condition was such that in a few hours the pressure of that splint caused gangrene and it spread so rapidly that the woman died. I don't think it is prudent to apply plaster of Paris to a recent fracture.

In relation to this injury, I think the result is very good indeed. In relation to these injuries about the shoulder, I have seen great stiffness and pain with contraction of the muscles. Patients are not able to raise their hand above their head, not able to button their clothes behind, not because they are paralyzed, but because the joint is stiff and there are adhesions which bind it down.

As to the fracture in the lower end of the radius, I agree with the doctor that they ought not to be called Colles' fractures, but calling them fractures of the lower end of the radius does not imply what we mean sometimes. A fracture three inches above the articulation will be a fracture of the lower end of radius, but is not what we mean when speaking of Colles' fracture.

Dr. Fowler:—In the question of the prognosis of injuries to the shoulder joint, whether it be fracture of the upper extremity of the humerus, or fracture of the neck of the scapula, or the two combined, the situation is a very serious one. The application of a well-fitted or properly applied fixed dressing will undoubtedly bring about a good result so far as the union is concerned; but the prognosis in this class of diseases is unfavorable because the disability exists for a long time. It may be due to the want of use and the consequent atrophy. Again, it is a well-known fact that in individuals above a certain age articular inflammatory conditions are much more apt to exist than in the case of younger patients. Again, direct injury to the circumflex nerve at the point where it is impinged against the humerus can account to a great extent for the conditions observed.

The prognosis necessarily will depend upon which of these two conditions is present, to say nothing of the inflammatory condition of the muscles themselves, the result of direct injury. As to the treatment in these cases, I must say I place a high valuation upon the combined use of massage and electricity. The time covered by the treatment is an important consideration; that they are tedious we all know. I have seen a number of them recover, even those in patients above middle age.

Dr. Burge:—This is a very interesting case and an exceedingly fine result and a very interesting discussion so far, and I have nothing to add to it.

Dr. Wight:—If I may be allowed a word, I would like to protest against the indiscriminate and early use of plaster of Paris bandages. I could enforce that by a large number of illustrations, but I will not take the time. I have seen such disasters follow that I am bound to protest against it. It is a very nice thing sometimes when used primarily, but mischief is apt to follow.

Dr. Delatour:—As regards the point at which this fracture was, it was not near the joint; it was at least between an inch and an inch an a half distant from the joint.

As to the immediate use of plaster of Paris in the treatment of fracture I would say I have treated a good many fractures and seen many more treated during my seven years of hospital experience in New York and Brooklyn in which plaster of Paris was applied immediately, and I have yet to see any trouble arising from its use. I have seen some cases in which the splint has had to be removed within a few hours after its application, but those cases have been rare, and in my own hands I have never had a case in which it has been necessary to do it. I have always been very careful in applying a sufficient wad of cotton, and then applying the plaster of Paris over it without a great amount of pressure, and I do not recall any case in which I have had any trouble.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society Building, 356 Bridge Street, on Tuesday evening, December 19th, 1893, at 8 o'clock.

The President, Dr. John C. Shaw, in the Chair.

There were about 100 members present.

The minutes of the November meeting were read and approved.

The Council reported favorably upon the following applications and recommended that they be elected to membership:

Drs. David M. Staebler, Horace S. Warner, Henry B. Cogswell, B. H. Richardson, James C. Hancock, F. M. Sharpe, William Snyder, William Henry.

The following applicants having been favorably reported upon by Council were declared elected to membership:

Dr. James Herbert Shawe, William Simmons, Howard B. Speer, H. S. Shevlin.

The Secretary presented the resignations of Dr. Charles N. Dixon Jones and Dr. Samuel B. Casey, which, on motion duly seconded, were accepted.

The following applications for membership were presented:

Dr. J. J. Terhune, 169 Adelphi Street, L. I. C. H., 1875; proposed by Dr. George Ryerson Fowler; Dr. Walter B. Chase.

Dr. H. S. Heath, 205 Patchen Avenue, University of New York, 1844; proposed by Dr. Walter B. Chase; Dr. George R. Fowler.

Dr. Edward Terry Buck, 140 Fort Green Place, L. I. C. H., 1888; proposed by Dr. William Nathan Belcher; Dr. John C. Shaw.

Dr. Jerome Beers Thomas, Jr., 32 Schermerhorn Street, L. I. C. H., 1892; proposed by Dr. J. H. Raymond; Dr. George McNaughton.

Dr. W. H. Phillio, 179 Herkimer Street, New York University, 1888; proposed by Dr. George E. Law.

Dr. Robert E. Coughlin, 237 47th Street, New York University, 1892; proposed by Dr. H. B. Delatour; Dr. David Myerle.

SCIENTIFIC BUSINESS.

Dr. J. Fuhs presented a paper entitled "Observations on Neurotic Disturbances of Gastric Secretion," which was discussed by Drs. Max Einhorn, of New York, and E. H. Bartley.

Dr. D. W. Barker presented "An inter-dental splint for the prevention of tongue-biting," and exhibited a patient who was wearing the splint. Discussed by Dr. Barber.

Dr. J. B. Mattison presented a paper on "Trionol, the New Hypnotic," and submitted samples of the drug. Discussed by Dr. Bartley.

Executive Business.

REPORTS OF COMMITTEES.

On behalf of the Committee appointed to confer with the Telephone Company, Dr. Emery reported that his Committee had conferred with Mr. Sargent, the superintendent of the Telephone Company, who stated that in order to comply with the request of the physicians for the free use of the pay stations in the city, it would be necessary for those physicians who still had the old single wire telephones, paying only $60 or $75 a year (of which there were about thirty-eight per cent.) to adopt the new metallic circuit and pay the full price of $100; that if they did this, then the Telephone Company would issue 200 tickets to every subscriber, which would entitle him to that many calls a year from any of the pay stations.

The Telephone Company wished to extend every facility in their power to physicians, and Dr. Emery thought that probably by pressing the matter further with the company a concession might be had as soon as more of the single-line telephones were replaced by metallic circuits. He asked for the opinion of the Society in the matter. Dr. Chase moved:

"That the Society approve of the action of the Committee and advise them to continue their labors with the Telephone Company, and that the Society as a whole will co-operate in any way the Committee may suggest which would be suitable to bring about the desired end." Seconded and adopted.

NEW BUSINESS.

Dr. J. L. Kortright, being eligible to permanent membership in the New York State Medical Society, tendered his resignation as a Delegate to that Society, which on motion was accepted.

The following nominations of officers for the ensuing year were made:

President, Dr. George McNaughton.

Vice-President, Dr. Joseph H. Hunt, Dr. S. G. Clark, Dr. Joel W. Hyde.

Secretary, Dr. David Myerle.

Assistant Secretary, Dr. W. C. Braislin, Dr. O. A. Gordon.

Treasurer, Dr. H. B. Delatour, Dr. Charles N. Cox.

Librarian, Dr. Wm. Browning.

Censors (5), Drs. Herman Bender, J. W. Hyde, J. Fuhs, C. F. Barber, George E. Law, A. H. Brundage, J. M. Winfield, Gordon Hall, G. R. Butler, Smith E. Jelliffe, H. H. Morton.

One Trustee (in place of Dr. Skene), Dr. John C. Shaw, Dr. Charles Jewett.

Delegate to New York State Medical Society, Dr. H. C. McLean, Dr. H. H. Morton, Dr. J. H. Droge.

There being no further business, on motion the meeting adjourned.

David Myerle,
Secretary.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association at the Chicago meeting elected the following officers for the ensuing year: President, Dr. E. P. La Chapelle, of Montreal; First Vice-President, Dr. Manuel Carmona y Valle, of City of Mexico; Second Vice-President, Dr. J. N. McCormack, of Bowling Green, Ky.; Treasurer, Dr. Henry D. Holton, of Brattleboro, Vt.; Permanent Secretary, Dr. Irving A. Watson, of Concord, N. H.

Place of next meeting Montreal, Canada, October, 1894.

REPORT OF COMMITTEE ON TUBERCULOSIS.

Mr. President and Members of the Medical Society of the County of Kings:

At the November meeting of this Society a communication was read from Dr. John Griffin, Health Commissioner of the city of Brooklyn, requesting the Society to take under consideration and to advise his department as to the best practical measures for limiting the prevalence and progress of pulmonary tuberculosis in this city. In deference to this request, and in accordance with a resolution which was offered by Dr. Z. T. Emery, unanimously passed by the Society, the President, Dr. J. C. Shaw, appointed a committee consisting of Dr. J. A. McCorkle, Dr. George A. Evans, and Dr. Ezra H. Wilson, to consider and report upon the matter.

After careful deliberation your Committee counsel that the Society make the following recommendations to the Health Commissioner in reply to his letter asking for advice.

Inasmuch as our knowledge of the cause and the method of dissemination of tuberculosis is exact, and that the majority of medical men recognize it as a contagious disease caused by the entrance into the body and the development of the tubercle bacillus, and that in the vast majority of cases the element of contagion is the sputum from the lungs of those afflicted with pulmonary tuberculosis, and that upon the proper care and disposal of the sputum depends our successful efforts to prevent the spread of the disease, and to increase the chances of recovery of those already afflicted, we urge upon you to take immediate action upon the following recommendations :

First: That the secular press, circulars, etc., be utilized to educate the public that pulmonary tuberculosis is an infectious disease, that it is acquired by the direct transmission of tubercle bacilli from the phthisical to those who are in health by means of the dried and pulverized sputum floating as dust in the air, and that it can be largely prevented by simple and easily applied measures of cleanliness and disinfection.

Second: That all public institutions, such as asylums, homes, hospitals, dispensaries, etc., be required to transmit to the Board of Health the names and addresses of all persons suffering from pulmonary tuberculosis within seven days of the time when such persons first came under observation.

Third: That the Health Department establish a hospital in this city to be known as the Consumptive Hospital, to be used for the exclusive care and special treatment of this disease, and that, so far as practicable, all inmates of other institutions suffering from tuberculosis be transferred to this hospital.

Fourth: That the Health Department undertake the bacteriological examination of the sputum for diagnosis in every case of pulmonary disease of doubtful character in hospitals or private dwellings or tenement-houses, when the physician in attendance desires that this be done ; this procedure to be carried out with a view of obtaining definite knowledge upon which the proper sanitary surveillance of those suffering from tuberculosis can be based.

Fifth: That whenever the Health Department has become aware of the existence of families or premises where tuberculosis exists or recently existed (as in case of death or removal) it shall take such specific measures as are required in such case.

Sixth: That the Health Department secure the passage of an ordinance by the Common Council of this city, prohibiting expectoration in public conveyances and in places of public resort.

Seventh: That a special bureau be established, to be known as the Bureau of Pathology, Bacteriology, and Disinfection, for the proper performance of the work as detailed above, and to which shall be referred the investigation of all cases of infectious and contagious disease that may require the attention of the Health Department.

Committee: J. A. McCorkle,
Geo. A. Evans,
Ezra H. Wilson.

Brooklyn, January 16, 1894.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and the Methodist Episcopal Hospital.

LAPAROTOMY IN TUBERCULOUS PERITONITIS.

Aldibert (Thèse de Paris, 1892; Centralblatt f. Chirurgie, No. xx., p. 429).

The author's principal studies are directed to tuberculous peritonitis as it is observed in childhood. Reference is made to that occurring in adult life only for purposes of comparison. A well-directed effort is made by Adilbert to discriminate between different forms of the disease as well as to estimate the prognosis and treatment in each variety, points heretofore almost entirely neglected in published reports of cases in which laparotomy has been performed for this disease. It may be well doubted if the present method suffices, although it is directed along the line of intelligent study. Whatever shortcomings, however, the study as presented by our author offers, the fault lies with our want of knowledge regarding the disease and because of the almost infinite variety of forms under which it appears. A large number of cases must be gathered together before any two will be found with features approximating similarity. Even the 200 cases brought together by Adilbert are insufficient for the purpose of demonstrating some of his groups in a convincing manner. It must be admitted, however, that the material which has been gathered has been very advantageously employed.

The following is Aldibert's arrangement of the subject :

- I. Form with ascites . .
  - Acute
  - Subacute
  - Chronic
    - Generalized
    - Cystic
- II. Fibrous dry form . .
  - Dry form, proper
  - Adhesive form
- III. Ulcerative form . .
  - Dry
  - Suppurative
    - Generalized
    - Cystic
      - Multilocular
      - Monolocular
- IV. Tuberculosis of the mesenteric glands.
- V. Tuberculous peritonitis with intestinal obstruction.
- VI. Tuberculosis originating in the genital tract . . .
  - Localized in the lesser pelvis
  - Generalized

In the acute form with ascites there is acute miliary tuberculosis of the peritoneum. The dry form proper is what is known among some authors as the miliary, small tuberculous nodules being scattered over the entire serous surface. Aldibert considers this as a transitory stage following resorption of existing exudations and merging into the adhesive form.

Among the many practical as well as startling points brought out by the author, the following may be referred to. They relate to the results obtained following laparotomy.

1. In the acute form, with ascites, its mortality was 100 per cent.

2. In the subacute form, with ascites, in children, 83.4 per cent. recovered.

3. In the subacute form, with ascites, in the adult, 50 per cent. recovered.

4. In the chronic generalized form in adults (48 cases), 71 per cent. recovered.

5. In the chronic generalized form in children (16 cases), 98.8 per cent. recovered.

6. In the chronic form, with encysted exudation, in children (9 cases), 100 per cent. recovered.

7. In the chronic form, with encysted exduation, in adults (56 cases), 76.7 per cent. recovered.

The author has not succeeded in explaining the remarkable results following laparotomy in tuberculous peritonitis. He advances the belief, however, that in some as yet unexplained manner the operation favors the fibrous transformation of tubercle and thus promotes a curative effect. This, however, leaves the subject but slightly in advance of its former position, in this respect at least. No reliance whatever is to be placed upon the supposed effects of different irrigating fluids, as well as the various powdered medicaments, employed.

GASTRO-INTESTINAL ANASTOMOSIS.

J. J. Mantigneau (Journ. de méd. de Bordeaux, 1893, No. 5; Centralbratt f. Chirurgie, No. xx., p. 435).

It would appear from the author's statement, that very few operations of this character have been performed in France. He was able to find but 14 cases which had been operated upon in that country. He further discusses different methods of operation. Upon the whole, the method with absorbable bone plates, so popular in America and England, is preferred. Mantigneau replaces the decalcified bone plate of Senn by a plate prepared from the hoofs of oxen. These are sawn or cut out and disinfected by means of boiling water or by a sublimate solution. The serous surfaces are approximated as when bone plates are employed.

TYPICAL EVACUATION OF THE INGUINAL REGION.

Carl Lanenstein (Deutsche Zeitschrift f. Chirurgie, vol. xxxv., p. 543).

In cases of extensive bubo or enlarged inguinal glands from other causes, Lanenstein prefers to employ typical evacuation of the groin to waiting for the slow processes of suppuration and granulation.

An obliquely transverse incision made parallel to Poupart's ligament is employed. This is supplemented by a vertical longitudinal incision. In the healing process the first named maintains its original length as represented by the cicatrix, while the latter is very materially shortened. The skin is turned back and the glandular structures bluntly dissected out. The edge of the knife, or what is a more useful instrument for the purpose, scissors curved upon the flat, must be occasionally employed, owing to the presence of adhesions. It may be necessary to resect a portion of the saphena vein. The hemorrhage is carefully arrested; all small vessels are ligated. The after treatment consists of packing the funnel-shaped wound with iodoform gauze. The length of time of treating may be very materially shortened by secondary suturing.

KOCHER'S METHOD OF OSTEO-PLASTIC RESECTION OF BOTH SUPERIOR MAXILLÆ.

Otto Lanz (Deutsche Zeitschrift f. Chirurgie, vol. xxxv., p. 423).

This very bold and successful operation of Kocher's was employed in the case of a youth of 17, suffering from a recurring sarcoma in the naso-pharyngeal cavity. The operation was performed as follows: The anæsthesia was induced by morphia and chloroform combined. The head was placed in the suspended position of Rose. The upper lip was split from the left naris downward. The reflection of the mucous membrane over the alveolar border was separated transversely and incised to the bone. After packing the parts a few moments to arrest the hemorrhage the chisel was applied, first to the left and then to the right body of the upper jaw, and at a height corresponding to the anterior nasal spine; both bodies of the upper jaw were thus separated in a transverse direction, above the alveolar process. Packing of the parts was again resorted to for a short time. The alveolar process and hard palate were then separated in the median line, whereupon the two lower halves of the upper jaw could be displaced by means of strong, sharp retractors. The vomer was turned to the right side portions of the turbinated bones removed, after which the entire nasal cavity, the naso-pharyngeal space, as well as the base of the skull, came into view. The antrum of Highmore was likewise exposed and its exterior wall fractured. The sphenoidal process was not broken. The incision was extended so as to include the soft palate. The tumor was removed from its attachments by means of the thermo-cautery, and its base was thoroughly cauterized. The after treatment consisted of chloride-of-zinc tampons, reposition of the parts and section of the bones and soft parts. The parts were completely healed without deformity in a month. No recurrence at the end of ten months. The method is applicable to cases of tumor of the vault of the pharynx, the naso-pharyngeal region, the base of the skull, and perhaps also to the cervical spine.

(The procedure of Annandale, which consists in passing a narrow-bladed saw through one naris and sawing completely through all the parts intervening between the nasal and oral cavities, after first incising the upper lip, is a far simpler and equally useful procedure. About the same amount of separation of the parts can be made, as well as accessibility to the regions above mentioned obtained, G. R. F.)

FIXATION OF FLOATING KIDNEY.

Riedel (Berliner Klin. Wochenschrift, No. 28, 1892).

Riedel's procedure is as follows: The usual incision extending from the twelfth rib downward is made. The renal capsule is divided. The kidney is now pushed strongly upward so that only its lower portion is visible. The middle portion of the capsule is now sutured to the quadratus lumborum muscle; laterally the peritoneum is united to the fibrous capsule. A strip of iodoform gauze is pushed between the diaphragm and the upper portion of the kidney. In order to ensure some irritation a mixture of bismuth and sublimate solution is poured over the wound surfaces. A second gauze tampon is placed at the former site of the kidney. The lower portion of the kidney approximates to the surface of the quadratus muscle. These iodoform strips are led out of the wound and left in position, if possible, for four weeks. Upon their removal a drainage-tube is introduced in an upward direction along the granulating canal; this is shortened gradually in the subsequent dressings.

UMBILICAL HERNIA AND ITS TREATMENT.

A. O. Lindfors (Sammlung Klin. vorträge, N. F. No. 63).

Prior to the last decade the management of cases of umbilical hernia, both in respect to operative treatment from necessity as well as procedures instituted for radical cure irrespective of the occurrence of strangulation, was eminently unsatisfactory. The prognosis was exceedingly unfavorable, both as to the mortality and final cure of the hernia. Radical operative measures are being more and more resorted to in recent years.

Basing his conclusions upon a study of all of the cases reported from 1751 to 1892, the author establishes the following:

1. Radical operation, and particularly simple laparotomy with extirpation of the sac and suturing of the freshened wound edges, is the very best treatment of umbilical hernia. It is applicable to all classes of cases and affords absolutely and relatively the best prognosis, both immediate and remote.

2. Expectant methods may still be deemed best for certain individual cases. Protective apparatus may be employed in cases of larger hernias in which the abdominal coverings are insufficient to cover in the defect; a hernia into which the liver passes, and which is irreducible, also belongs to this class. These cases, however, constitute but a small proportion of those coming under observation.

3. The influence of aseptic and antiseptic treatment is shown by comparative studies of cases prior to and since the last decade to be of the very greatest importance.

4. It is entirely unjustifiable at the present day to permit to remain untreated umbilical hernia in an otherwise healthy infant.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,
Professor of Obstetrics, Long Island College Hospital.

A DEVICE FOR IMMOBILIZING THE PELVIS AFTER SYMPHYSEOTOMY.

Gueniot (Nouv. Arch. d'Obstet. et de Gyn., Mai, 1893) presented to the Obstetrical and Gynecological Society of Paris an apparatus for fixation of the pelvis after symphyseotomy. He terms it the iliac compressor. It consists of two metallic plates about 15 cm. long and 12 cm. wide, which fit the lateral aspects of the pelvis. For greater lightness they are fenestrated. The pressure is secured by means of adjustable straps. The hips of the patient are protected by plenty of padding and by the use of gutta-percha plates lining the metal. The compressors project far enough anteriorly to lift the straps away from contact with the wound and the abdominal surface.

RIGIDITY OF THE CERVIX UTERI IN LABOR I. ANATOMICAL RIGIDITY.

Wallich (Nouv. d'Obstet. et de Gyn.), in a paper read before the Obstetrical Society of France, discusses so-called anatomical rigidity of the cervix as a cause of dystocia. By anatomical rigidity is understood a rigidity wholly distinct from that of muscular spasm or of cicatricial lesions. If such a condition exists, he claims it is unlike anything that occurs in other structures of the body. Histological examinations of the cervical tissues in two cases of supposed anatomical rigidity failed to detect alterations consistent with that theory. In a somewhat extended clinical study of the question Wallich had found that in all cases of supposed simple rigidity the trouble could be accounted for by some fault in the agencies by which dilatation is accomplished, such as premature rupture of the membranes, failure of accommodation, small pelvis, inertia uteri.

Maygrier in discussion said that anatomical rigidity of the cervix cannot be wholly denied, as witness the cases of aged primiparæ. It is entirely analogous to what is well recognized in case of the perineum. Gaulard was of similar opinion.

Porak recognized anatomical rigidity, but remarked that dilatability of the cervix differed greatly in normal cases, and it was difficult to say where pathological rigidity began.

Fochier had seen cases of true rigidity of the neck. He thought the cause should be looked for in the relative arrangement of the muscular elements rather than the condition of the elements themselves.

Pinard said he had always been embarrassed in attempting to explain to pupils anatomical rigidity of the uterine neck. He thought such cases to be explained by the existence of histological changes that were not recognized.

2. PATHOLOGICAL RIGIDITY.

Guéniot considers the management of labor in pathological induration of the cervix with special reference to the treatment of cancer in the latter condition. He advocates multiple incisions. He uses also a special uterine dilator.

Pinard prefers Cæsarean section even after the death of the child. He objects to incisions as certain to tear, and often to a dangerous extent. He cites a case in which Tarnier practised incisions and delivery with forceps. The woman died on the following day. There was a large rent extending into the rectum and the bladder was badly lacerated. Pinard, in another case, had a similar experience. In two cases in the practice of Pinard the women were saved by the Porro operation.

ETIOLOGY AND TREATMENT OF ECLAMPSIA.

(Trans. de Société Obstetricale de France, Nouv. Arch. d'Obstet. et de Gyn., vol. viii., No. 4.) Guéniot, while he admitted that eclampsia is in the main due to a toxæmia, did not consider this the only cause. The importance of reflex irritation as a factor in the etiology had been pointed out by Auvard and Rivière. Guéniot cited the following cases, which are of interest in connection with the question of etiology: In the first, eclampsia appeared at the eighteenth day after confinement. The origin was clearly an orbital neuralgia. Six attacks occurred, the convulsions being only partially controlled by chloroform. The patient recovered without incident. The cause here was not a toxæmia, but merely an exaggeration of the reflexes. The urine, unfortunately, was not examined.

In the second case there was a veritable toxæmia without true eclampsia. The woman had been pregnant for five months; for a month there had been œdema, violent cephalalgia, and marked albuminuria. After fifteen days of milk diet the condition was much improved. Then suddenly spontaneous abortion occurred and a single convulsion, which was obviously of reflex origin excited by the expulsion of the fœtus. Chloroform would have prevented the attack.

In a third case eclamptic attacks occurred from indigestion, while the toxæmia was diminished under a milk diet.

Chambrelent reviewed the literature of the subject. Doléris, he said, had described a pathogenic microbe in eclamptic urine, but recently he had acknowledged that microbes found in the urine proved absolutely nothing.

The latest researches of M. Blanc comprised five observations in which he discovered microbes living in the blood.

In the case of a woman in the service of M. Moussous, the author, with M. Sabrazes, inoculated the blood of the finger in different culture mediums. Positive results were obtained only in broth and in agar. But broth tubes which had not been innoculated developed the same organisms as the inoculated tubes.

Combemale and Buot inoculated the blood of four eclamptic women, three post-partum and one in labor. These inoculations were fertile and gave streptococcus aureus. It is probable that these patients were at the same time infected. The observation is not, therefore, conclusive.

M. Herrgott published, during the last year, a series of observations upon the same subject. In nine observations made at the maternity at Nancy in co-operation with M. Haushalter the inoculation was negative. Recently, in Germany, Egler made a series of inoculations on six cases with negative results in all.

M. Chambrelent added three personal observations. The blood of the subject was inoculated in a considerable number of tubes. In one experiment all the tubes remained sterile. In a second experience, of twelve tubes two became cloudy.

The observations of Beer, published in the *Centralblatt* have shown that the bacillus coli communis is always found in the blood twelve hours after death. The author, in his researches of the last year with M. Tarnier on the toxicity of the urine of eclamptics, has shown that the animals that resisted a first injection were saved. Eclampsia in his opinion is apparently due to poisoning by a toxine. Thus far it has not been possible to discover the presence of a veritable pathogenic bacillus. The only bacteria found in the cultures have been saprophytes or the bacillus coli communis, which is certainly of cadaveric origin.

Maygrier (Nouv. Arch. d'Obstet. et de Gyn., viii. anneé, No. 7) reports a case of eclampsia which is of interest with reference to treatment. The woman was a primipara at twenty years and in labor at term ; was brought into the Maternité de la Pitié after the fifteenth convulsion. She had been in deep coma for twelve hours. For three days before the attack there had been amnesia, epigastric pain, intense cephalalgia, dyspnœa, and extreme œdema. The few drops of urine found in the bladder coagulated in mass on heating. The os was dilated to the size of a one-franc piece and the child dead. A drachm of chloral was given by the rectum. Two more eclamptic attacks occurred in which the period of tonic convulsions lasted nearly two minutes. The face was cyanotic, respiration completely suspended, and death apparently imminent. Chloroform was given without effect upon the eclamptic seizures. The respiration was loud, short, and jerky. Temperature, 38.5° C. No urine could be obtained by catheter. Four hundred grams of blood were taken from the median cephalic vein. Fœtus expelled a few hours later. Convulsions continued, with persistent coma in the intervals. Resort was then had to Tarnier's method of gavage with milk. One hundred and fifty grams of milk were introduced into the stomach hourly by means of a stomach tube passed through the nares. Within ten hours the bladder contained thirty grams of urine. Patient was given hot baths at 38° C. and a purgative injection. The amount of urine steadily increased. Consciousness returned, the temperature became normal, sight was restored and complete recovery followed.

Oui and Sabrazes related experience, to show that in certain cases writers who have described a specific microbe of eclampsia have probably had to deal with the bacterium coli or other intestinal bacteria.

Gaulard contended that attacks of eclampsia might occur from digestive disturbance as well in adults as in children.

Guéniot thought toxæmia and medullary excitability equally indispensable factors in the etiology. If the one or the other is lacking there is no eclampsia.

Herrgott, alluding to the microbic theory, called attention to the fact that the microbes of the urine in eclamptic women are pathogenic, which is not true of non-eclamptics. He was inclined to regard the cause as a complex one.

Porak and Bernheim discussed the treatment of eclampsia by subcutaneous injections of salt solution. Hypodermic were preferable to intra-venous injections. They had treated six cases, five eclamptics and one a serious case of uræmic dyspnœa. The latter had five grams of albumin to the litre. In spite of a milk diet the urine fell to 800 grams, to 600 grams, and finally to complete suppression. The situation was grave. Six hundred grams of salt solution were injected at three o'clock and another at eleven o'clock P.M. The patient was apparently moribund. After an injection of caffeine the urine increased to 600 grams with two-fifth grams of albumin. The day following the volume rose to 1,200 grams. From this time the urine steadily increased. The woman was confined without accident and finally recovered.

A second case was that of a woman thirty-three years old, primipara, with œdema of inferior extremities. She had ten attacks of eclampsia before admission. Two hundred grams of the salt solution were injected, with the effect of increasing the secretion of urine, but the convulsions continued and the patient died.

In a third case a primipara twenty-nine years old had ten attacks of eclampsia before admission and fifteen after. The urine contained forty grams of albumin to the litre. Two injections of salt water were given. Under a milk diet the urine became more abundant and the woman ultimately recovered. In several other observations the results were similar.

Fochier had recently come to rely on chloral in the treatment of eclampsia. He gave it through a stomach tube. Washing out the stomach before injecting the chloral helps absorption and possibly is of service in other ways. He had used as much as eighteen grams of chloral in twenty-four hours.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon Brooklyn Eye and Ear Hospital, Visiting Ophthalmologist to Kings County Hospital.

TOXIC AMBLYOPIA FROM IODOFORM.

Priestly Smith (Ophthal. Rev., April, 1893). Toxic amblyopia, the evidence of an axial optic neuritis, is not uncommon as a result of alcohol or tobacco poisoning. Cases have also been reported due to lead, salicylic acid, quinine, and some other drugs, but thus far only two cases are on record of toxic amblyopia due to the administration of iodoform.

Smith reports the case of a man aged thirty-one who was suffering from chronic tubercular pleurisy and peritonitis. Iodoform was administered for forty-one days, gradually increasing the dose until for the last ten days patient took thirty-two grains per diem. The iodoform was then stopped on account of toxic symptoms. The eye symptoms were marked visual impairment and defined central scotoma, somewhat larger than those commonly found in tobacco amblyopia. The visual disturbance apparently began a day or two before the administration of iodoform stopped and while the patient was taking the maximum of thirty-two grains a day. The ophthalmoscope showed some haziness of the disc margins. After four weeks he had a central color scotoma in each eye, with a small, absolute scotoma just below the fixation point. Vision as then one-sixth in the right eye and one-fourth in the left. Treatment with strychnia at first hypodermically, and later combined with iron, by the mouth, was followed by marked improvement, so that about three months after the beginning of the attack his vision was six-eighths in each eye and no scotoma could be discovered. That tobacco was not a factor is shown by the fact that the patient had used it but once in the seven weeks preceding the attack, and further, that while convalescing he resumed smoking without in any way prejudicing his recovery. The dose of iodoform administered was not in excess of that advised for such patients.

TROPA-COCAINE, THE LOCAL ANÆSTHETIC.

Alt (Am. Jour. of Ophthal., June, 1893) has experimented with this new alkaloid, derived from the Java coca plant. It is closely connected with the tropeine group and atropine. Its action is similar to that of cocaine, but not identical with it, having a much less toxic action in depressing the cardial ganglia and heart muscle. It is not a constant mydriatic, and its action is somewhat more speedy and evanescent than cocaine. Considerable initial hyperæmia and irritation result from its instillation into the eye (three per cent.). It is undoubtedly a strong local anæsthetic, of value in the removal of foreign bodies, but less useful in operations on the globe. Its freedom from toxic effects may render it of value subcutaneously for general surgical operations, but its present high price will doubtless interfere with its general use.

SUBCONJUNCTIVAL INJECTIONS OF SUBLIMATE.

Darier (Annales d'Oculist, April, 1893). This, the last of several articles by this author on the subject, gives very favorable reports of his results, not alone in sympathetic trouble, but also in uveal, corneal, and to a less extent retinal and nerve affections as well. He claims never to have had to record disasters due to subconjunctival injections of sublimate. In gray tabetic nerve atrophy the results have been null. In white atrophy consecutive to inflammation, improvement may follow injections, but only to a slight extent. In optic neuritis symptomatic of intra-cranial lesion, the good effect of sublimate injections may be quite marked, but is almost invariably ephemeral. One should be able to remove the cause in these cases to relieve the effect. In inflammations of iris, ciliary body, or choroid due to external causes, the effects obtained by the advocated local therapeutic measure are superior to all that general treatment of these affections has up to the present offered us. Such is not, however, the case in the endogenous inflammations due to a diathesis or rather a general infectious malady, such as syphilis, or tuberculosis, or to metastasis; but even here the injections may prove a valuable supplement to the general treatment. The more obstinate and chronic syphilitic uveal inflammations are greatly benefited, but in the fresh cases of acute iritis, syphilitic or otherwise, one should recognize that the general treatment is the first indication. Experience has shown that subconjunctival injections are contraindicated, for the time at least, in all cases where a vascular stasis renders the absorption of the medicament by the obstructed lymph channels difficult or impossible. In such conditions the sublimate solution acts as an irritant more harmful than useful, and causes active pain and marked chemosis.

The technique is very simple, only a hypodermic syringe with well-sharpened platinum point being needed. Cocaine is used, and a fold of conjunctiva about six to eight millimetres from the cornea may be raised with forceps, the point of the needle introduced beneath the surface and the injection made. Or the use of forceps may be omitted, the needle being passed directly under the conjunctiva while the patient looks up, care being taken to direct the point tangentially to the globe. Strict asepsis should be observed and the needle point disinfected each time it is used by being heated to redness in a flame. The solution should be carefully prepared, an aqueous solution 1-1000. No alcohol should be used, but the addition of a little cocaine is sometimes of service in sensitive patients. The pain produced by the puncture is usually slight or nothing. However, the needle may pierce a nerve in its course, and the solution produces by its irritant action quite intense pain. This will vary in severity with the quantity and strength of the solution and the sensitiveness of the patient. One may bear a long series of injections without apparent discomfort, another suffer actively for several hours after each treatment. As a rule, the pain is slight and consists rather of a feeling of warmth and some discomfort on ocular movements than active pain. The subsequent œdema varies with the quantity of solution and individual predisposition. It is more often considerable when one has to do with inflammations which interfere with the ocular circulation. It is wise to warn the patient of its possible occurrence and to cover the eye with a light occlusive bandage. The ordinary dose is about a minim of a 1–1000 solution, but this is often increased to five or ten times as much, and the injections may be used as often as every day. Aside from these urgent cases it is better, as a rule, to use weak doses frequently repeated, say one minim every two days, gradually increasing. The duration of the treatment must be governed by the case. If no benefit result after ten injections, it is usually useless to push the treatment further. No other substance gave as good results as sublimate.

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DISEASES OF THE THROAT AND NOSE.

BY WILLIAM F. DUDLEY, M.D.

TREATMENT OF EPITHELIOMA OF TONGUE BY ELECTROLYSIS.

E. Draispul (Jour. Lar., Rhi., and Otol., vol. vii., No. 2) reports a case of epithelioma occurring on side of tongue of a young man twenty-five years of age which was cured by electrolysis.

When first seen an ulcer 2.5 by 1 centimetre was present having an excavated base and covered by thick gray mucus. It caused no pain. Cervical glands on right side of neck were enlarged and hardened. Apices of both lungs were tuberculous. History of syphilitic affection denied. Under the microscope a section of ulcer showed epithelioma.

In destroying this tissue, electrolysis preferred to galvano-cautery.

1. Because less painful.
2. Less reaction following.
3. Result obtained more durable.

A steel needle connected with negative pole was applied, using a current of ten milliampères for ten minutes. In six sittings, at intervals of three days, the ulcer was entirely destroyed. After this two small gray nodules appeared on top of the tongue. These were removed by galvano-cautery.

At end of two months the sides of the original ulcer showed firm cicatrices, but two new large ulcers presented where the nodules had been treated by galvano-cautery. These ulcers, like the first, were destroyed by electrolysis, and with them disappeared the enlarged cervical glands. Eleven months later no evidence of ulcers or swelling of tongue can be found.

Attention is called to epithelioma occurring in so young a patient, to apparent cure by means of electrolysis, to more permanent result obtained by this method than by galvano-cautery, to beneficial action upon affected tissue, the glands, at distance from needle.

MYXŒDEMA CURED BY THYROID EXTRACT.

John P. Henry (British Med. Jour., No. 1684). The date of onset of myxœdema was fourteen years before present examination, when she was delivered of a still-born child.

Then face and limbs began to swell and the mind became torpid. These symptoms increased until the expression of the face was nearly lost, the eyelids, alæ nasi, and lips were much thickened. The skin of body was very dry and harsh. The hair very thin. Hands "spade-like."

Swellings existed over each clavicle. The thyroid was atrophied and its site very tender. The memory very poor. Speech slow and devoid of tone. She complained of unpleasant taste and smell. The temperature of body was below normal, ranging from 94° to 96° F.

Menstruation was very irregular, the interval occasionally extending over a year. No disease of kidneys present.

There is a history of phthisis in the family.

The patient was treated by hypodermic injections of thyroid extract. Bi-weekly doses were administered of thirty minims for nearly three months.

After the first injection the patient had an epileptiform fit and was then unconscious for an hour.

On second day after first dose the temperature rose to 98° F. After fourteenth injection a small abscess formed. The nineteenth caused faintness and severe pains in back.

Since first injection the menses have been regular. The swelling of the face has gradually disappeared. The color of face became natural, the anæmia and malar flush leaving. The hair began to grow on head

Physical signs of phthisis appeared at apices, but did not advance. The speech and memory have been regained. Bowels are regular instead of constipated, as before. The quantity of urine has slightly increased. Lately the patient has been fed on raw thyroid gland of the sheep. This caused at first nausea, but is now tolerated. The bowels and menses are not so regular as when the hypodermic method was used. In eating the thyroid it may be given raw or underdone, one lobe being taken every morning with breakfast.

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CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

A HITHERTO UNDESCRIBED SYMPTOM OF HEREDITARY SYPHILIS.

Dr. Carini, of Palermo (*Internat. Klin. Rundschau*, Nos. 2–4, 1893), in children with hereditary syphilis and lasting for one or two weeks, found, in addition to the other evidences of the disease that they suffered during the first hours of life from hiccup (singultus). After excluding other causes, C. concludes that it is due to a neurasthenic condition of the central nervous system, especially the bulbar centre. His explanation is that the nutrition of the nerve centres is disturbed by the toxicity of the blood. Singultus precedes the specific coryza. This symptom disappears "like magic" upon the administration to the mother (nursing) of iodide of potassium and to the child of liq. van Swieten (perchloride of mercury). C. thinks that singultus in children with hereditary syphilis is dependent upon a neurasthenic diathesis resulting from syphilis.

BRONCHIAL SEPTICEMIA IN INFANTS.

Hutinal and Claisse have published (*Rev. de Med.*, No. 5, 1893) observations on the nature of a form of acute septicemia observed in young infants, which they believe due to rapid infection of the bronchial mucous membrane by micro-organisms derived from lesions in or about the mouth or pharynx. The cases occur frequently as complications of measles, but sometimes arise independently. They are particularly likely to arise in hospital wards when an extensive epidemic of measles has led to crowding. The infant, without obvious cause, rapidly becomes extremely ill, the face is pale and of a leaden color, the eyes sunken, the cheeks blotched with red, the expression anxious, the alæ nasi work, respiration is hurried (70, 80, or even 100), the pulse rapid (150 to 180).

and the temperature rises quickly to 104 degrees F. Auscultation reveals numerous subcrepitant *râles ;* there may, however, be no dullness, and the extent of lung occupied by *râles* may be no greater than a few days earlier when the patient did not appear very ill. Vomiting and diarrhœa of grey-green stools may be present. In a large number of such cases an infective process may be observed on the lip-cracks with a greenish bottom and indurated surface, especially on the upper lip. From these cracks a superficial serpiginous ulceration extends ; the lower lip is excoriated and covered with pultaceous sordes. The buccal mucous membrane is red and bleeds easily, the tonsilar crypts are filled by a creamy exudation, the nose runs and the discharge excoriates the upper lip. The prognosis is exceedingly bad. In a considerable proportion of such cases no pneumonia is found after death. The mucous membrane of the larger bronchi is inflamed, and this inflammation may extend to a greater or less distance towards the smallest bronchi, which, however, are not uniformly affected. The liver is enlarged and presents extensive fatty degeneration, affecting especially the portal side. Bacteriological examination of the contents of the bronchioles showed that a streptococcus was present in every case but one, and generally in large numbers, sometimes in pure culture. In one case the pneumococcus was present alone, in others the streptococcus was associated with staphylococci or the bacillus coli. The streptococcus was in an extremely virulent state. In three cases only was the streptococcus found in the blood, and the pneumococcus once. As a rule the bronchial glands, liver, kidneys and spleen contained no microbes. The symptoms, the authors conclude, are produced by the absorption of soluble poisons elaborated by the streptococci in the bronchi and bronchioles. (Abstracted in epitome of *Brit. Med. Jour.*, June 17, 1893.)

OTOLOGY.

BY J. E. SHEPPARD, M.D.,

Adjunct Professor of Otology, New York Polyclinic; Assistant Surgeon, Aural Department, Brooklyn Eye and Ear Hospital.

THE HEARING POWER IN DEAF-MUTES, BEING THE RESULTS OF THE EXAMINATION OF 175 DEAF-MUTE CHILDREN.

James Kerr Love, Glasgow (Arch. of Otology, April, 1893), after giving in some detail the methods of examination and comparing his results with those of other investigators in the same line, sums up his results as follows :

1. Total deafness is very rare among deaf-mutes. For aërial sounds it is not greater than seven or eight per cent., for bone-conduction sounds, even less.

2. Hearing for speech is pretty common. It exists to a utilizable extent in twenty-five or twenty-seven per cent. of deaf-mutes, and from ten to fifteen per cent. are only semi-mute. Under the finger system of teaching these semi-mutes become rapidly deafer, and soon totally dumb. The oral system may do something to prevent this, but it can only be properly dealt with by the acoustic method.

3. Cranial conduction exists in almost all cases, and a large vibrating tuning-fork is almost always heard in this way. It is also heard in the majority of cases by aërial conduction. In a small number of cases can such sounds as those of a watch or Politzer's acoumeter be heard. On the other hand, I am much at variance with Toynbee and Hartmann, who found most deaf-mutes totally deaf. Hartmann's further statement, that total deafness is commoner in acquired than congenital deafness, does not coincide with my experience. Most of those examined by me and found to have hearing for vowels, consonants, and words, were cases of acquired deafness. Only two of my nine cases of total deafness were said to have been born hearing. I cannot altogether explain these differences excepting, perhaps, by the absence of a standard test and a uniform method of examination.

THE EFFECTS OF DYNAMITE ON THE EAR.

Castex (Journ. Laryng., Rhin., and Otol., June, 1893). The autopsies on the two victims of the explosion in the Boulevard Magenta, and examination of the ears of three other persons who did not succumb, have shown that (1) tympanic ruptures of various forms are produced in the posterior half of the tympanum; (2) otorrhagia is almost completely absent; (3) there has been no lasting action on the internal ear.

VIBRATORY MASSAGE OF THE MIDDLE EAR BY MEANS OF THE TELEPHONE.

Wilson (Detroit), (New York Med. Journ., February 25, 1893). The author has used the hand telephone of Bell, the diaphragm of which can be set into powerful vibration by the interrupted current from an ordinary faradic coil, for the carrying out of the vibratory treatment of middle-ear troubles. A great variety of sounds can be produced by this means, by altering the rate of interruption of the current and varying the number of cells employed.

The *séances* lasted from five to fifteen minutes, and vibrations of the greatest intensity were used where there was the greatest impairment of hearing.

Five cases are reported, and in three some improvement in the tinnitus was noticed, but in no case was there any improvement in the hearing.

SUPPURATIVE MEDIAN OTITIS, WITH MULTIPLE NUCLEI OF SUPPURATION FROM STAPHYLOCOCCI.

(Journ. Laryng., Rhin., and Otol., April, 1893.) The patient complained of pains in the tibiæ. The diagnosis could not be made sufficiently accurate to justify surgical operation. However, an abundant bilateral otorrhœa occurred, without premonitory symptoms, showing by cultivation a pure culture of staphylococcus pyogenes albus, elucidating the condition. Some days afterward death occurred, and the diagnosis of infectious osteomyelitis was confirmed. The femurs, tibiæ, and fibulæ were filled with pus, which was merely a pure culture of staphylococcus pyogenes albus.

CASES OF INTRA-CRANIAL ABSCESS, WITH REMARKS.

Hugh Ed. Jones (Liverpool Med. Chir. Journ., January, 1893). In this interesting communication the author lays stress upon the following important proposition: "That until the so-called mastoid antrum, the attic of the tympanum, the anterior surface of the petrous bone, and (in cases of suspected cerebellar abscess) the sulcus lateralis have been thoroughly explored for pus, it should not be assumed that a temporo-sphenoid or cerebellar abscess exists, or at least no operation should be undertaken to relieve the last two conditions which does not in its preliminary part satisfactorily dispose of the others."

Two cases, one of abscess of the temporo-sphenoidal lobe, the other a *probable* subdural abscess with meningitis, which discharged through the tympanic cavity, are then related, both of which recovered. There is further a tabulation of the leading symptoms met with in intra-cranial lesions following ear disease.

ON THE CLINICAL SIGNS OF THE AFFECTIONS OF THE AUDITORY NERVE.

Gradenigo, of Turin (Arch. of Otology, April, 1893), has had the opportunity of observing some interesting cases of deafness attributable to lesions of the acoustic nerve. In one of them, a cholesteatomatous tumor on the left nerve, he was able to demonstrate by anatomical examination the integrity of the labyrinth. The clinical characteristics which he met in the largest proportion of acousticus affections, and which can serve as diagnostic criteria in doubtful cases, were the following :

1. Diminution of the acuteness of hearing, and that too demonstrated by examination with forks of middle register. This diminution was associated with the other clinical symptoms which in general are proper to affections of the perceptive apparatus. As a differential diagnostic criterion, one observes in affections of the nerve, that the acuteness of hearing for high tones, which diminishes the earliest in changes of the labyrinth, is here well maintained.

2. Another important clinical characteristic of certain affections of the acousticus consists in an excessive functional exhaustibility. According to Gradenigo's experience, this symptom may be met with, although very seldom, in middle-ear affections, especially in neurasthenic individuals. This exhaustibility is also often produced by alterations in the inner ear, but only in affections of the auditory nerve does it reach a sufficiently marked degree to be characteristic. The functional exhaustibility is often so considerable that the results of the examinations by the different methods become so essentially modified that it is impossible, if no account is taken of this fact, to form an accurate conclusion as to the amount of hearing power present.

Of hysterical anæsthesia of the acoustic nerve, he says in brief : "This exhibits special symptoms, among which stress is to be laid upon the absence of attacks of dizziness and upon the uniform distribution of the defects in the musical scale.

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NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings,*

AN OUTLINE OF THE EMBRYOLOGY OF THE EYE. By W. A. Holden, A.M., M.D. G. P. Putnam's Sons, New York. 1893.

This is a neat little book of seventy pages, and sets forth the essentials of ocular development in a clear and concise manner. It is amply illustrated with thoroughly commendable reproductions of the pen drawings made by the author from the original specimens, and does credit both to him and to the publisher. It may be recommended as one of the best English essays on the subject, and well worthy of the Cartwright prize for 1893.

RICHMOND LENNOX.

A HANDBOOK OF OPHTHALMIC SCIENCE AND PRACTICE. By Henry E. Juler, F.R.C.S., Ophthalmic Surgeon to St. Mary's Hospital, Surgeon to the Royal Westminster Ophthalmic Hospital, London. New (second) edition, revised and enlarged. In one handsome octavo volume of 562 pages, with 201 engravings, 17 colored plates, test types and color-blindness test. Cloth, $5.50; leather, $6.50.

Nearly ten years have passed since the first edition of this work appeared, and the advances in ophthalmology during that time have necessitated a careful revision of the old material. This has been conscientiously done, and while the same general plan has been followed, some chapters have been almost entirely rewritten and much new matter added. The illustrations have been increased in number, but the substitution of photomicrographs, illustrative of ocular histology and pathology, for the former hand-drawings is unfortunate, as the photomicrographs are, as a rule, blurred and indistinct, and give but an imperfect idea of the appearances they are intended to represent. The chromo-lithographs representing the fundus changes have been increased in number and improved, and with the revision of the text the work is well brought up to date. Its teachings are sound, the subjects clearly presented, and it may be recommended to students and those who desire a not too voluminous text-book on ophthalmology.

RICHMOND LENNOX.

A CHAPTER ON CHOLERA FOR LAY READERS: HISTORY, SYMPTOMS, PREVENTION AND TREATMENT OF THE DISEASE. By Walter Vought, Ph.B., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York; Fellow of the New York Academy of Medicine, etc. Illustrated with colored plates and wood-engravings. In one small 12mo volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co. 1893.

This is a most concise account of the history of cholera both abroad and in this country, of the causes of the disease, its symptoms, diagnosis and treatment, together with measures of prevention, quarantine and disinfection.

CHOLERA: ITS CAUSES, SYMPTOMS, PATHOLOGY, AND TREATMENT. By Roberts Bartholow, M.D., LL.D. Philadelphia: Lea Brothers & Co. 1893. Pages, 132.

In this book we have a history of the disease, including an account of the various epidemics which have visited the country, together with its causes, symptoms and pathology. Special interest attaches, however, to the portion devoted to treatment. The author's experience in two epidemics renders his observations of great practical value. Enterocolitis, hypodermatoclysis, the treatment at Hamburg, Paris and the New York Quarantine, are fully detailed.

These volumes of Vought and Bartholow will be of great utility if cholera ever appears in this country again.

OPERATION BLANKS. Prepared by W. W. Keen, M.D. Published by W. B. Saunders, Philadelphia. 50 blanks, price 50 cents.

A very useful form, containing directions as to the preparation of the patient, the dressings necessary, medicines and instruments required, and the arrangement of the room and bed. With such a reminder as this, nothing should be omitted or forgotten by either physician or nurse.

INTERNATIONAL CLINICS. Vol. III., Third Series. 1893. J. B. Lippincott Company, Philadelphia. Pages, 356.

The following are some of the subjects treated in this volume, and their authors: "Hysterical Trembling, Stammering and Mutism," J. C. Shaw; "Pelvic Cellulitis," A. J. C. Skene; "Pernicious Anæmia," G. A. Gibson; "Diabetes," W. B. Canfield; "Asthma," A. Haig; "Phthisis," N. Bridge; "Blood-spitting," T. Oliver; "Climatic Treatment of Phthisis," T. J. Mays; "Gastric Ulcer," J. Tyson; "Turpentine in Typhoid," I. N. Danforth; "Œdema," J. E. Atkinson; "Dilatation of Heart," J. M. Anders; "Nephritis," W. H. Porter; "Epilepsy," C. K. Mills; "Locomotor Ataxia," C. E. Beevor; "Traumatic Neuroses," B. Sachs; "Syringo-Myelia," W. Sinkler; "Insanity," E. D. Fisher; "Use of Forceps," K. N. Fenwick; "Result of Alexander's Operation," etc., P. F. Mundé; "Parovarian Cyst," M. D. Mann; "Relation of Uterus to Intestines in Obsteterics and Gynæcology," P. Budin; "Cataract," F. B. Tiffany; "Hypertrophy of Tonsils," G. M. Lefferts; "Syphilitic Skin Lesions," H. G. Piffard.

Twelve plates and twenty figures elucidate the text.

DUANE'S STUDENTS' DICTIONARY OF MEDICINE. The Students' Dictionary of Medicine and the Allied Sciences. Comprising the Pronunciation, Derivation and Full Explanation of Medical Terms, together with much collateral descriptive matter, numerous tables, etc. By Alexander Duane, M.D., Assistant Surgeon to the New York Ophthalmic and Aural Institute; Reviser of Medical Terms for Webster's International Dictionary. In one square octavo volume of 658 pages. Cloth, $4.25; half leather, $4.50; full sheep, $5.00. Philadelphia: Lea Brothers & Co. 1893.

The experience of Dr. Duane as reviser of medical terms for Webster's International Dictionary fits him most admirably to prepare a work for physicians and students, and we are, therefore, not surprised to find in the volume before us a book of great merit. The review of a dictionary can only be thoroughly written after it has been the daily companion for a long time, and we do not feel that we can do justice to this one until after we have had occasion to refer to it many, many times. But from the examination we have been able to give it we shall be greatly disappointed if it does not meet the test. It is compact and well adapted to office use, and its mechanical execution is excellent.

The definitions are of the "explanatory" style, including not only a statement of meaning, but likewise much descriptive matter under headings which would be inadequately represented by a definition, however full. Thus, under diseases are given their causation, symptoms and treatment; under important organs, an outline of their structure and functions; under each drug, its actions, uses and preparations, the information being arranged in logical order, so as to give a rational and connected idea of the subject. Extensive tables of bacteria, muscles, arteries, veins, nerves, etc., are included. Each word is followed by its correct pronunciation (a new feature in works of this class), given by means of a simple and obvious phonetic spelling. Derivation, an unexcelled aid to remembrance of meanings, is likewise fully and clearly stated, Greek letters being replaced with those of the English alphabet, for the convenience of those unfamiliar with Greek.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By Roberts Bartholow, M.A., M.D., LL.D. Eighth edition; revised and enlarged. New York: D. Appleton & Co. 1893. Pages, 820.

"Bartholow's Materia Medica" is too well known to the profession to need more than a word to say that in this edition the author has brought his text-book up to date. The decennial revision of the United States Pharmacopœia made it necessary that there should be a similar revision of this popular treatise. As Professor Bartholow was a member of the Revision Committee he is able to speak *ex cathedra*. The metric system is adopted throughout, but a tabular statement of the equivalents makes the interpretation easy.

BELLADONNA: A STUDY OF ITS HISTORY, ACTION AND USES IN MEDICINE. Illustrated.

This is the title of a pamphlet issued by Johnson & Johnson, of New York, which contains a complete history of the drug and its application as a remedial agent. F. B. Kilmer, the editor, has consulted every authority of recognized importance in its preparation. The illustrations have been made especially for this brochure.

A MANUAL OF DISEASES OF THE EAR. By George P. Field, M.R.C.S., Aural Surgeon to St. Mary's Hospital, London. Fourth edition. Illustrated with colored plates and wood-cuts. Philadelphia: Lea Brothers & Co., 1893.

The fact that a fourth edition of Mr. Field's manual has been so soon called for is in itself proof of its value to a large class of readers. It is an octavo volume of 382 pages, is handsomely gotten up, is clearly and concisely written, and contains some exceptionally good illustrations, most of which are peculiar to this work.

One or two statements of Mr. Field's, however, we do not feel should be allowed to pass without criticism, since they seem to us, in the light of our present knowledge of otology, to be misleading. One of these is in reference to functional examination of the ear with tuning-forks, which, after a few preliminary remarks, is dismissed with the following paragraph, viz.: "A variety of other tests with the tuning-fork devised by Rinné, Gellé, Politzer, and others, are used by some aurists. I shall not, however, complicate this chapter by describing them here, because, after considerable experience, I am sceptical as to their value, even at the hands of an expert." Strip us thus largely in our diagnostic work of the tuning-fork tests and it seems to us we would be in a sorry plight. We feel bound to take exception to another statement of Mr. Field, on page 36, with reference to the stapes: "The stapes is by far the most important of the ossicles from the surgical point of view, because, after loss of most of the membrane, together with the malleus and incus, very fair hearing often remains ; dislocation of the stapes, on the other hand, is always associated with marked deafness, often complete." That Mr. Field should have allowed this last clause to remain in this edition indicates to us that he has not kept pace with the recent American advances in the surgery of the middle ear.

However, with the exception of these and a few other less striking statements, we have nothing but good to say of the work. It contains much of value, both to the general practitioner and the specialist, to the latter of whom is especially commended the chapter on "Osseous Tumors of the Meatus," in which Mr. Field has certainly had an exceptionally varied experience. With its many interestingly reported cases, and its handsome illustrations, the book will prove itself a valuable addition to any medical library. J. E. SHEPPARD.

A MANUAL OF TREATMENT ON CLINICAL THERAPEUTICS. By J. Burney Yeo, M.D., F.R.C.P., Physician to Kings College Hospital and Professor of Clinical Therapeutics, Kings College, London. Two volumes. Philadelphia : Lea Brothers & Co., 1893.

The author of "Food in Health and Disease" has added to his already well-established reputation by his recently published volumes. They are written from "the point of view of treatment." This statement, made in the preface, is probably meant to indicate that the work is intended as a practical treatise. This idea is well carried out in the succeeding pages.

Dr. Burney Yeo has had for many years a large hospital experience, and his observations have been duly recorded. But the work is something more than its name implies. Before the treatment of various diseases is given, there is an account of the symptoms and signs, or the *medical* history, if one may use the term.

It may be said, without disparagement in any way, that the paragraphs describing the disease are quite as interesting reading as those devoted to therapeutics. Indeed, there has been no volume published of late years where a description of disease as found at the bedside is given in such a fresh and helpful manner. Of course, there are not to be found here any long histories or discussions of theories, and not a word is said about any other of the subjects relating to theory and practice.

One feels, however, in reading as though he were being taken into the confidence of the author, exactly as if he were "making rounds" with him in his wards and were being given a clinical lecture at the bedside of each patient. The work is carefully written, and we may find on every page many valuable suggestions. HENRY CONKLING.

A TEXT-BOOK OF MEDICINE. By Dr. Adolf Strümpell, Professor and Director of the Medical Clinic at Erlangen. Second Amer. ed., from the sixth German, translated by H. F. Vickery, A.B., M.D., and P. C. Knapp, A.M., MD., of Harvard University, with Editorial Notes by Frederick C. Shattuck, A.M., M.D., Professor of Clinical Medicine (Harvard) and Physician to the Mass. General Hospital. Illustrated. New York: D. Appleton & Co., 1893.

The first American edition of Strümpell's work was published about six years ago. The present volume contains an increase of fifty-eight pages, twenty of which are given to nervous diseases. The remainder are made up of scattered paragraphs.

The first change to be noted is on page 1, which contains some new matter relating to enteric fever and a new illustration.

Many questions which six years ago were in doubt are given now as assured facts.

The work is an exhaustive treatise on theory and practice, good in all departments, but worthy of much praise for its "Diseases of the Nervous System." The first edition brought out reviews praising this section very highly. The present is in keeping with the first.

The 316 pages given to nervous diseases are so scientifically mastered that they equal many pretentious treatises devoted exclusively to this branch of medicine. Neurologists might find some points for adverse criticism. For instance, Dr. Gowers would never call *sciatica* a neuralgia, for he believes it to be a neuritis. But this is a minor point.

The article on "Localization of Cerebral Diseases" (pp. 710–726), especially the paragraphs devoted to the centres of speech, is *the most perfect to be found in any published work*, presenting the subject in a most graphic manner.

The work is handsomely dressed and is certainly "medicine up to date."

In passing, it may be remarked that the American translators should be congratulated on the excellence of their work, for the first English edition, published by Lewis, is a reprint of the American. HENRY CONKLING.

A MANUAL OF DISEASES OF THE NERVOUS SYSTEM. By W. R. Gowers, M.D., etc. Vol. II. Philadelphia: Blakiston, Son & Co., 1893. Pp. 1069. Price $4.50.

The first volume of this second edition of Gowers was reviewed in the JOURNAL for October, 1892. In a general way what was there said applies equally to the second part. This treats of diseases of the brain and the cranial nerves plus general and functional nervous disorders.

Again, the illustrations, 182 in number, are well chosen, but here reproduced in a most execrable manner.

The first sixty-six pages are devoted to structure and functions. Symptoms and their interpretations take up sixty-two pages. Very interesting and valuable are chapters (covering seventy-one pages) devoted to affections of the optic and ocular nerves. This particular part of neurology is one of the author's special provinces. In fact, all through the work a very considerable amount of personal observation is judiciously interlarded.

The subject of treatment is fairly well handled, though the personal equation of an author always seems to come out strongest on this side. Take, *e.g.*, Grave's disease ; no mention is made of cannabis indica. Contrary to certain German experiences altitude treatment is condemned. Nor does he find much encouragement from surgical procedures. In cases of plumbism he very properly emphasizes the importance of withholding iodides until the free and intestinal lead has been removed.

Taken as a whole, this must be considered an excellent and standard treatise. WILLIAM BROWNING.

MISCELLANEOUS.

THERAPEUTIC NOTES.

Emergency treatment of a toothache.—Dr. J. E. Weaver, of Rochester, makes the following valuable contribution to the *N. Y. Medical Record.*

Tooth-ache is a little thing in the books, but many physicians would rather meet a burglar at the door on a dark night than a call to cure a bad toothache of several days' continuance ; a hypodermic of morphine only postpones the evil day, and usually the patient is respectfully referred to the dentist. The tooth should not be extracted while the jaw and gums are inflamed and the latter swollen, and it is the physician's duty to treat the case until the above conditions are removed. Always keep a small phial containing the following mixture : Chloroform, gtt. x. ; glycerine, gtt. x. ; sat. sol. ac. carbol., gtt. x. ; morphine, gr., j., with a small wad of absorbent cotton. If the offending tooth has a cavity or decayed surface, saturate a small pellet of cotton with the above mixture and put into the cavity, or against the decayed surface as the case may be—never pack the cotton in, or the more is the trouble—but have the pellet small enough to enter without crowding. In most cases this will end the trouble. When the gums are swollen and tender paint two or three times, two minutes apart, with a four per cent. solution of cocaine. This time of year your patient may have been eating a good deal of fruit. The tongue and mucous membrane of the mouth are pale, sour stomach, and next day the toothache will return. Give ten grains of sub-carbonate of bismuth and ten grains of phenacetin at once, and a similar dose before each of the three following meals, with a laxative if needed, and stop all fruit for a few days, and it will not return. The same powder every two hours with cessation of fruit eating will stop the persistent, tormenting neuralgias so prevalent at this season.

Gonorrhœal Inflammation about Neck of Bladder.—Hourly doses of salicylate of soda up to ten grammes daily when acute.

—MEYNIER.

IOANNES, SAMBVCVS, MED, ET, HISTOR

Martin Lister Knight,
and
Dr. of Phisic. 1646. P. Van Somer Sculp.

THE

BROOKLYN MEDICAL JOURNAL

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

A NEW OPERATION FOR THE TREATMENT OF OLD FRACTURES OF PATELLA WITH ELONGATED LIGAMENTOUS UNION.

BY M. FIGUEIRA, M.D.,

Visiting Surgeon, St. Catherine's Hospital.

Read before the Brooklyn Surgical Society, October 5, 1893.

Whatever view one may take of the treatment of recent cases of fracture of the patella, whether we advocate Lister's method of open arthrotomy with wiring of fragments or prefer any of the subcutaneous methods recently advocated by Walkman, Ceci, Stimpson, and others, or adopt the old method of splints and plasters; whatever view we may take in regard to different cases and circumstances, there are two classes of fracture of the patella, however, in which the treatment by open arthrotomy and wiring is the only treatment not only indicated but imperative. These two classes of cases are, first, compound fracture of the patella, and second, old fractures of that bone with overstretched ligamentous union. Of the first class of cases it is not my purpose to speak here.

It is in regard to the operative treatment of the second class—fracture of the patella with elongated ligamentous union—that I propose to speak to-night.

It is a fact well known to surgeons that a moderate amount of separation of the fragments in these cases causes very little inconvenience, but when the separation between the fragments reaches several inches, as it often does, then such patient becomes a cripple. The limb is apt to give way under him at any time; he is in danger of fracture of the other patella, as often happens; is not able to go up or down stairs without great trouble, and the pursuit of any occupation requiring walking or standing is out of the question.

Now, the use of apparatus and splints in these cases is a poor substitute for a sound joint, is expensive, the instruments get out of order, and such patients are cripples at the best; so that in the treatment of such cases one is driven to the use of the knife as the only means promising any kind of a good result.

Up to the present time the only operation performed and recommended in the treatment of these cases is the open arthrotomy and wiring of fragments as recommended by Lister. One peculiarity of these cases of overstretched ligamentous union is the great mobility of the joint. There is no stiffness in these cases. The articular adhesions have stretched and given way along with the ligamentous union between the fragments. This free motion of the joint is the bane of the patient, as it is just this that allows the limb to give away so easily.

In operating on these cases the danger of an open arthrotomy always has been to me a cause of concern and anxiety. So it occurred to me that perhaps the fragments could be exposed, freshened, and wired together without opening the joint. Evidently nothing is to be gained by opening the joint in such cases. Motion is good enough, there are no adhesions or effusion to get rid of. In these old cases, whatever rent was present in the capsule is closed up; the capsule itself is thickened by inflammation and the fragments stand out above and below the joint, while the ligamentous union between them and the unsupported capsule dips down in front of the joint.

The study of this condition of things led me to devise an operation by means of which the fragments are exposed and their broken surfaces cleaned and freshened, and the two fragments are brought in position and wired without opening the joint.

The operation is performed as follows: A vertical incision is made over the centre of the joint, and the ligament between fragments exposed and the skin dissected from the ligament and fragments. The fractured edge of the fragment will be found covered with cartilage and fibrous tissue, the attachment of the stretched ligamentous union. With the point of a strong scalpel held vertically against the bone, grasped with the fingers after the manner of holding a knife while sharpening a lead-pencil, and by holding the thumb against the fragments so as to steady the knife, the entire extent of the fractured surface can be cleaned and the bone exposed without opening the joint. Of course, in using the knife close to the posterior aspect of the patella, care must be exercised; but with care the entire broken surface down to its posterior edge can be entirely cleaned. After this is accomplished the bone is drilled and wired in the usual way. After the wires are in place, and before bringing the fragments together and tightening the sutures, a probe or director should be passed behind the wire sutures so as to keep back the joint capsule that has a tendency to bulge forward between the fragments when they are brought together.

Of course, in some of these old cases muscles have to be divided, and quite some trouble at times is experienced in bringing fragments together from contracture of the muscles and fascia.

The advantages of this operation are obvious. The joint is not opened and the great danger of the operation is removed. The fragments are exposed and fractured surfaces freshened, so insuring proper union. The result is as good as when the joint is opened and the recovery comparatively much shorter.

One of the objections to the old method of treating fracture of the patella is that the union is ligamentous and well stretched, and the patient will have to be submitted to a cutting operation after all. Now, if, as I claim, the stretching of the ligamentous union between fragments can be cured by such a simple operation as here described, without opening the joint and endangering the patient's life, then one of the objections to the old treatment is removed and one more argument is added against the operative treatment of recent fractures of the patella.

DISCUSSION.

Dr. Wight: The idea of the paper to me is novel; I have no experience on that point on which to base remarks. If it can be done, it is certainly an advantageous procedure; but we have learned in recent times that opening the knee-joint with proper precautions is as safe as any other procedure, and I have been in the habit of opening the joint and bringing the fragments together; not right away after the injury has occurred. I generally wait a week or two weeks and sometimes longer before operating, and my experience so far teaches me that that is the safer plan. There are some cases where I avoid wiring altogether, but if I am going to operate I should incline to open the joint and keep it aseptic and wire the fragments. That has been the procedure I have carried out, but if this method can be used, and you can wire the fragments without opening the joint, I see no reason why it should not be done; but I should feel greatly inclined, feeling the confidence that I do, to cut the whole thing out and make another kind of a job of it. That would be the surgical impulse that would seize me for the moment, irrespective of the condition of the joint, for as far as I know the only trouble that is coming to the joint is from me. I have had excellent results; the very best results I ever had in broken knee-pans have been in this way.

Dr. Pilcher: I am much interested in this suggestion of Dr. Figueira for dealing with certain cases of elongated fibrous union of fractured patellæ. I can appreciate, however, that it can only be in a very limited number of cases that the method would be applicable. I regret very much that the doctor's efforts to permit us to see the patient upon whom he performed this new method of treatment were in vain, and that we have not had the privilege of examining it.

The amount of disability which results in cases of broken patella varies remarkably, not seeming to depend so much upon the distance between the fragments as upon some other as yet unexplained cause. Persons with three-fourths of an inch separation will sometimes have much greater disability than others with three inches separation. Were the amount of separation comparatively small, the buckling in of the posterior soft tissues that would be produced by leaving them when the many fragments were brought together would be comparatively little; but if the separation was considerable the projection of this fold into the knee-joint I can imagine might become a source of weakness in the joint, one I should hesitate to experiment with lest it should become caught between the tibia and femur like a foreign body, or lest portions of it should become detached, forming a floating body in the knee-joint, or yet, through traumatism it might be the starting-point of inflammatory disease involving the joint in the future. This plan of Dr. Figueira has been tried but in one case yet, so that sufficient experience has not yet accumulated to tell us whether these dangers which I now present as a matter of discussion are real or not. As to whether we should adopt such a method or not must depend very much, I think, upon whether we have reason to be satisfied that our precautions against infection of the knee-joint are sufficient. We have had many cases presented here where extensive work on the knee-joint has been done without any serious consequences following, and many cases of most perfect results after the free opening of the joint and suturing the fragments of the patella. If the reasoning which was so thoroughly elaborated by Dr. Fowler before the Kings County Medical Society some time since was correct, these old cases are much more favorable for an operative procedure in which the knee-joint is opened than are recent cases, and I should think that many surgeons would feel that they were not exposing their patient to very great hazard if they did open it, but, on the contrary, that they were simply carrying out the calls for perfection of technique if they pruned away all superfluous tissue and restored the joint nearly to its primary condition. Anything that falls short of that is certainly faulty, and I would make that serious criticism upon the procedure that it does not restore the joint to its natural condition, but that it does leave it in an unnatural state, which may possibly become a source of after inconvenience.

Dr. Fowler: The question of the treatment of disability of the lower extremity following failure of union of fractured patella is one of very great interest to the surgeon. Fractures to the patella are quite frequent; they form about one-fiftieth of all the fractures combined, and frequently arise. The very serious question will come, Shall we apply the wire suture or shall we endeavor to get as good a result as possible without the risks of operation, or shall we accept the risks of getting wide separation of the fragments, trusting to subsequent treatment, operative or otherwise, to restore the usefulness of the limb? I was once asked by a patient if I would have a fractured patella wired in my own person. I said, "Yes, if I could do it myself." I did not mean by that that I have not confidence in the operation as performed by others, but that statistics are of very little value in these cases, and a surgeon's own inclination and experience and his confidence in the methods he adopts will govern him to a very great extent in his decision in these cases.

I am glad to see that the trend at the present time is to secondary wiring rather than the primary procedure. I am well aware that some very good results have been obtained in the primary wiring, but we also know that Bremner and Prof. Dennis, of New York, showed that there was, first, a considerable mortality following the operation, and second, a large number of disabled members, and third, the necessity of subsequent operative procedures which of themselves were followed by death, amputation of the limb, etc., which ensued upon attempts at wiring the patella. In a certain proportion of the cases, conditions are present which would prevent the application, to the mind of the thinking surgeon, of the primary operation of wiring the patella; I need not revert to those conditions that relate particularly to rupture of the capsule of the joint itself. In this class of cases at least a secondary operation, if any at all, is indicated. And then there are cases in which patients object to any wiring whatever; a rather large proportion of cases that come under our observation are of this kind. And then there is a certain proportion of cases that refuse operation, who will subsequently suffer from marked disability because of either undue tilting of the fragments or a long fibrous band of union. I take it that the disability is not so much due to the length of the band as to the fact that the fragments are placed out of line, so that the force which is applied is not directed along the line calculated to obtain the greatest advantage in extending the leg. The mal-position of the fragments may be due to elevation of the upper fragment from constant irritation of the muscular apparatus and also the sinking of the lower fragment. Efforts directed to securing the lower fragment in position are, therefore, to be instituted as well as to holding the upper fragment down. I mention this because I think the principal efforts of the surgeon have heretofore been directed to overcoming the spasmodic action which affects the upper fragments, and the lower fragment not receiving the attention it deserves. I am reminded of a recent case in which the lower fragment was dropped and tilted, and held in such a position that it would have been absolutely impossible to have restored it to its proper condition except by open arthrotomy. Even after that had been performed, and after extensive V-shaped incisions had been made transversely to the long axis of the quadriceps extensor muscle, it was still found impossible to bring these fragments together until the tubercle of the tibia had been loosened and transplanted in an upward direction, so that the lower fragment might be brought into apposition with the upper fragment. I simply mention this to show the difficulties that would occur in the operation devised by Dr. Figueira without opening the joint in such a case as this.

The preventive treatment of mal-position of the fragments, as well as recurrence of long ligamentous union which I have adopted in the last few years, in cases in which I have wired the patella, as well as in non-operative cases, has been, after the patient is convalescent and the splints and bandages have been removed, to prescribe for the patient some form of check apparatus which shall prevent an undue stretching of the patella, or, in case of fracture, to prevent any refracture from accident. This same check apparatus is quite as useful for the purpose of preventing overstretching of the ligamentous band as it is in the other case. I don't know that there is anything new about it; it is simply a posterior splint with a joint opposite the knee and a check so arranged that it may be set to admit of the flexion of the leg at any angle; this may be changed from time to time until the patient obtains the power to kneel. This is a method of preventing the condition which Dr. Figueira's operation is designed to overcome. It should be kept in force until flexion can be obtained without pain and without separation of the fragments.

The operation itself I have very little to comment upon. Like most of the operations designed to prevent opening of the joint in fastening together the fragments of a fractured patella, it must necessarily be limited in its application. There is no operation which can be applied to all classes of cases. If it is found that this can be applied even to a limited number of cases as one of the means at our disposal, I think its originator will have done a service to mankind.

Dr. Burge: There is very little to add except to express our thanks to the author of the paper of the evening for calling our attention so pointedly to so interesting a subject. The vigilance of the surgeons of the present day allows so few greatly elongated fibrous unions that I think it is ten years since I have seen one. Previous to that it was not an unusual thing to run across them from time to time, and my recollection is that in some of those cases the great mobility of the patella, the ability to draw it down readily, would indicate what class of cases or which particular cases would be most likely to be successful in operating after the manner that has been pointed out.

Dr. Figueira: In regard to the danger of opening the knee-joint in these cases, the fact that in this country and abroad the best surgeons have tried to get around it by different means and devices, even some that do not seem to comply with the requirements of the case, seem to show clearly that the danger of opening the knee-joint is greater than some represent. It seems to me that when men of such eminence and so fearless try to find a roundabout way to accomplish this end, the danger is greater than many of us are willing to confess to.

The danger of opening the joint, to my mind, is very great and serious, and whenever I can get around it I do so, and that is the reason I advise this operation, and especially in these cases in which I did not think there was any very great need of opening the joint. Of course, I do not speak of cases in general, nor do I speak of recent cases by any means; I speak of old cases in which the ligament has been stretched and a cutting operation is needed.

Now, in regard to what Dr. Pilcher said in regard to the folding back of the tissues behind the fragments, I thought of it, and I thought of it in this way: There will be a certain amount of exudation between the capsule and the wired fragments, and in time as this exudation is removed the tissues will gradually be brought back to their normal condition. In cases of effusion in the joints, when the effusion is removed they gradually recover their shape, and there are no loose folds. It is the same in the removal of tumors under the skin, the skin gradually falls back to its place.

Anyway, I propose, in those cases that I think proper, to perform the operation and see the results of it.

IODIDE OF LIME IN CROUP.

BY V. E. LAWRENCE, M.D.,

Halstead, Kansas.

For many years I have been a careful reader of the medical journals and have obtained from them so many valuable suggestions, and have derived so much information from them not to be found in even the most voluminous text-books, that I feel indebted to them, so that whenever I come into possession of medical knowledge which is valuable to the medical practitioner, I regard it my duty to give the information through the medical journals.

Some months ago, through an article written by Dr. A. G. Beebe, of Chicago, on the use of iodide of lime in membranous croup, I became aware of the fact that probably in this drug had been discovered what I had for ten years sought, namely, a remedy which could be relied upon in the treatment of this most dreadful enemy of childhood.

I asked my wholesale house to send to me one ounce of the remedy and received in return a white or yellowish salt marked iodide of calcium. As the U. S. Dispensatory makes no distincion between the iodide of calcium and the iodide of lime, I put the drug aside, thinking I had the article referred to by Dr. Beebe.

Soon after, a boy eighteen months old showing all the symptoms of membranous croup fell into my hands. I prescribed the remedy, and after a hard fight for four or five nights he recovered. But his breathing was noisy and labored, and it was necessary to call to my assistance the steam bath, and to administer every three hours five-drop doses of the fluid extract of quebracho, a drug which possesses the unique power of enabling the red corpuscles to assimilate a larger quantity of oxygen from the same amount of air. By its use the dusky hue of the skin was changed to a more ruddy color and the heart also strengthened. This is a most valuable remedy in all respiratory diseases and is worthy of a larger recognition than it now enjoys.

I then wrote Dr. Beebe for additional information regarding his remedy, and in reply he informed me that he used a dark-colored drug called the iodide of lime and not the white or yellowish salt called iodide of calcium. He also gave me the address of the manufacturers, a well-known firm in Boston, Mass., to whom I immediately sent fifty cents and received by mail one ounce of the iodide of lime with instructions to protect it from the light.

I have used the drug in two cases since. In both an easy and speedy recovery took place and without the hard fight had on the first case in which the iodide of calcium was used.

Dr. Beebe advised that ten grains be dissolved in four ounces of water and that one or two teaspoonfuls be given every fifteen, thirty, to sixty minutes, according to the severity of the symptoms, until the dry croupy cough merges into the moist cough, and until all danger of its return at night has passed, when some other suitable remedy may be used. Dr. Beebe writes that he has used the remedy for twenty years in a pretty large city practice without the loss of a single patient, and he has come to look upon the disease as one to smile at, but not to be afraid of. I used the drug as suggested by Dr. Beebe with the above happy and unusual results.

Some time ago I wrote an article regarding the remedy and since its publication have received so many letters from physicians all over the United States asking where the drug can be had, that I have concluded to reproduce the article, in the hope that it may be the means of removing from the homes of the people the terrible anguish experienced in seeing their little ones going down to the grave in the embrace of this unrelenting enemy of childhood.

ARE THE PARASITIC THEORIES OF THE ETIOLOGY OF CARCINOMA TENABLE?

BY JAMES P. WARBASSE, M.D.,

Assistant Surgeon to the Methodist Episcopal Hospital, Brooklyn.

Read before the Brooklyn Pathological Society.

In the early part of the year 1893, I published a paper on the parasitic theory of the etiology of carcinoma.[1] At that time numerous articles had appeared, in which it was attempted to demonstrate the parasitic nature of the disease; and many writers, though not claiming to have discovered any parasite, had expressed the belief that such was the cause of carcinoma.[2] It was with the object of calling attention to certain fallacies in this theory and to conclusions which were being drawn from too meager data that I published my paper. A number of excellent articles in this same line have recently appeared, and especially worthy of mention are those in American literature by Councilman[3] and Gibbes.[4]

Our knowledge of the relation of parasites to disease has made such mighty strides within these last few years, and the etiology of so many diseases which before had been obscure has been placed on a sound basis by the irrefutable demonstration of their bacteriological origin, that it has almost seemed that ere long the most of pathology must have for its basis some of the lower vegetable or animal forms.

Observing the tendency of this great current, many far-seeing pathologists have hinted at the bacteriological origin of this or that disease, and have won glory when in the course of time their wise predictions have been proven and universally accepted. So striking have been these revelations that it would seem that one could scarcely go amiss in surmising at etiology along this line. This enthusiasm has led a host of pathologists, observing the already demonstrated causes of the gumma, the tumor albus, the xyloma, and the actinomycosis granuloma, to seek for similar causes in other tumors of unknown origin.

The great amount of study which has been given to carcinoma has as yet failed to establish the nature of the disease. The theories of Virchow, Thiersch, Cohnheim, and Klebs, incomplete as they are, stand at the present time for our most advanced views on the subject. The parasitic theory of the etiology of carcinoma was long ago hinted at. More than forty years ago, Virchow[5] observed the peculiar minute bodies between the parenchyma cells and also within the cells of carcinoma and of molluscum contagiosum. These bodies have since been regarded as sporozoa, although he considered them to be endogenous cell formations and not parasites. This unicellular body has of late been the object of much observation and has been given a biological place among the gregarinidæ.

Pfeiffer[6] observed bodies which he called sporozoa in both sarcoma and carcinoma. He has also found a similar appearance in the epithelial cells of herpes zoster.

Darier[7] claims to have discovered the same class of parasites in certain skin diseases. He speaks of them as very closely resembling epithelial cells.

Wickham,[8] Hacke,[9] Malassez and Albarran,[10] Steinhause,[11] Foa,[12] Ströbe,[13] Vincent,[14] Henkelom,[15] Thoma,[16] and Soudakewitsch[17] have all reported parasitic cells in carcinoma, and the first of these observers has regarded them as the probable cause of the disease, though they can not be demonstrated as etiological factors, nor have cultures or inoculations been made. On the other hand, Russell,[18] Schütz,[19] Cornil,[20] Hansemann,[21] Török,[22] Ribbert,[23] Tommasoli,[22] Noegerath,[24] Borrel,[25] Firket,[26] Coats,[27] Gibbes,[28] and others, who have observed these bodies, incline to regard them not as parasites but as products of cell disintegration or as karyokinetic nuclear changes.

Podwyssozki[29] and Sawtschenko[29] have spoken with great assurance on the presence of parasites in carcinoma cells. The former has pointed out their similarity to the coccidia found in the human liver in cysts of the bile ducts. He has also found them scattered through the liver independent of any tumor formation.

Ströbe,[13] who has observed these bodies not only in carcinoma but in non-malignant tumors as well, does not feel convinced of their parasitic nature because of the difficulty of excluding the question of nuclear degeneration.

Delapine[30] and Malassez[31] have found these bodies in nearly all of the rabbits which they have examined.

Steinhause[11] found a similar organism in the epithelial cells of the alimentary canal and pancreas of the salamander.

They have also been observed in granulation tissue, in syphilitic gummata,[37] in the epidermis,[26] and in all sorts of malignant tumors.[15]

Schütz[19] regards these peculiar intracellular appearances which have been described as parasites as due to red-blood cells and leucocytes which have entered within the cell, the latter giving the granular appearance, the former the homogeneous appearance, described as peculiar to these bodies.

Eberth[32] has designated as pseudo-nuclei these cell inclusions. He is inclined to regard them as due to the changes brought about by preparing the cells for examination.

Gibbes[28] has made preparations of carcinoma after the methods prescribed by observers who have studied these bodies. The conclusions at which he has arrived are antagonistic to the parasitic doctrine. He regards the parasite-like bodies as altered cell structures, due to the process of preparing the specimens for study; for in tissues treated in such a way that the cells retained their normal appearance, nothing resembling a parasite could be discovered. Only when the processes of hardening, etc., were such as to destroy the normal appearance of the cells was he able to find the so-called parasites.

I have found in a variety of carcinomata these peculiar bodies which could not be regarded as ordinary cell constituents. In a young carcinoma of the breast, stained with picro-carmine and afterwards washed out in one per cent. hydrochloric acid, they presented the appearance of crescentic bodies, deeply stained and contained within the nuclei and rarely observed in the extra-nuclear protoplasm. In another carcinoma of the breast of longer standing treated by the same stain, they appeared as homogeneous crescentic bodies, both in the nuclei and cell substance. They were present in like manner in the nuclei of an epithelioma of the lip and in an infiltrating carcinoma of the stomach. In an ordinary glandular carcinoma of the breast, not only the smaller homogeneous bodies were found within the cells, but the larger intercellular structures were also present.

The structures described by Eberth as having something of the appearance of large bacilli, and which he regards as altered protoplasmic network, were frequently observed in these carcinomatous cells. They are analogous to the bacillus-like objects occurring in fat cells when stained with carbolfuchsin.

The so-called parasites, I have found, are best shown by those methods of preparation which best fix the karyokinetic figures. In a lymphatic nodule in the earliest stage of carcinomatous infiltration, which had been hardened immediately after extirpation and treated after the method of Flemming for fixing the nuclear mitoses, the peculiar crescentic and spindle-shaped bodies were most clearly shown; and in this specimen, too, they most strongly suggesting altered nuclei. That these intracellular bodies are nuclear derivatives is to my mind the most plausible of theories. This view has been strengthened by discovering them in direct anatomico-physiological relation with the cell nuclei. I have observed carcinoma cells in the "dumb-bell" stage of the process of division. At one pole were the peculiar mycotic striations of a recently divided nucleus; at the other pole was a crescentic body, stained by the safranin a perfectly homogeneous red, without a sign of granular or striated appearance, but looking more like a hyaline mass and corresponding to many of the descriptions of the carcinoma parasite.

A number of observers have also endeavored to discover bacteria in an etiological connection with carcinoma. Rappin[33] claimed to have discovered a diplococcus as the cause of carcinoma, and even to have inoculated rabbits with positive results. Scheurlen[34] found a spore forming "carcinoma bacillus," which he was able to cultivate on gelatin and potatoes. Kubasoff[35] discovered a bacillus in carcinomatous tumors, which he was able to cultivate on various media. He injected pure cultures into animals with the result of producing death. The autopsies showed nodules scattered through the internal organs, which he regarded as carcinomatous.

But these observations, claiming a specific bacterial origin for carcinoma, have all been thrown aside either on the ground of inaccuracy or the want of further proofs.

The elaborate researches of Adamkiewicz[36] have evolved the most recent theory. He holds that carcinoma presents all the characteristics of a chronic infectious disease, the parasite of which we have not been able to discover. He refuses to recognize carcinoma cells as identical with epithelial cells, and points out that they present three forms in the course of their development. The young form is that resembling the leucocytes ; in a higher stage of development, they approach the epithelial cells; and lastly, they become carcinoma cells with their tendency to the formation of irregular projections, and finally, to degeneration and disintegration. This degeneration in the later stages he regards as a feature of differentiation from the epithelial cells. He assumes that carcinomatous tissue possesses toxic properties and proves it by inoculating animals with bits of tumor and by injecting filtered watery extracts, producing death in a few hours or days. This special poison he has called "cancroin." It seemed without doubt to him that carcinoma is a parasitic disease. The parasite not growing on the usual culture media, he undertook the use of living tissue in their stead and planted bits of carcinoma in the brains of rabbits. The carcinoma cells were observed to migrate from the implanted particles in the direction of the least resistance along clefts in the brain substance, to become implanted and form nuclei for further propagation. Therefore he concludes that the carcinoma cells themselves are to be regarded as foreign bodies and are themselves the specific parasites of the disease. To this parasite he has given the name coccidium sarcolytis, and this, he holds, is the source of the "cancroin," the irritating action of which causes the changes in normal tissue.

We see, when we now come to sum up these observations, the conflicting opinions of the various observers with regard to the question of parasitism in carcinoma. The descriptions of the alleged parasites differ widely with the different writers. Some have described one thing, some another. The extent of distribution is also an almost universal one. Objects of the same appearance as the peculiar bodies found in carcinoma have been discovered in the greatest variety of widely different diseases and also in normal tissue as well.

When the theory of the bacteriological origin of carcinoma was found untenable, it gave place, among those who sought for a parasitic etiology, to the doctrine of the sporozoa or coccidia. Against these stand the great number of observers who believe that these bodies which have been interpreted as animal parasites are the products of disintegrated nuclei or nuclei in the process of mytosis. The whole evidence of their parasitic nature is based upon the insufficient ground of their appearance within or among the carcinomatous cells. They have not been isolated or cultivated outside of these cells. The microscopic appearance alone is inadequate for the basing of such a conclusion. The pronounced tendency of carcinoma cell nuclei to disintegrate and the mytoses occurring in growing cells may well account for these peculiar appearances. Red-blood cells and leucocytes may possibly account for some of them, as Schütz has assumed. It would also seem, as Gibbes has observed, that the changes brought about in animal cells by our processes of hardening, embedding, and staining can in a degree be held responsible for these things.

A fact which favors the parasitic doctrine is that the inoculation of patients suffering with carcinoma with certain ptomaines produces a distinct reaction in the growth. This reaction has been obtained with a number of the pus-producing organisms, with extracts made from carcinomatous tumors, with cadaverin and other products of albuminous decomposition. The local phenomena are not unlike those in the well-known tuberculin reaction. These reactions have been observed in both carcinoma and sarcoma. In the present state of our knowledge reactions of this sort are supposed to indicate the presence of micro-organisms of some sort associated with the tissues reacted upon. In view of the variety of bacteria and albuminous products capable of producing these changes in carcinoma, they cannot be regarded as pointing to any specific parasite.

The fact that certain granulation tumors are of infectious origin does not justify the conclusion that carcinoma, clinically and histogenetically different, has a similar cause. The transplantation or infection with carcinoma cells is nothing more than can be done with skin, periosteum, or other tissues and occurs in the benign as well as the malignant growths. With the granulation tumors it is different. A secondary growth of tubercular or syphilitic tissue is not brought about by the transplantation of the cells making up the growth, but by the transplantation of the specific micro-organism by the blood, lymph, or other channels. The irritating products evolved by the specific organism then give rise to an inflammatory process peculiar to the disease.

The cells of such a secondary deposit are by no means descendants of the cells of the primary growth, as are those of carcinoma. The latter, when implanted remote from the mother tumor, continues to produce cells of the parent type, the pre-existing cells taking no part in the formation of the characteristic parenchyma. Secondary deposits of a carcinoma remain true to the original type, just as transplanted normal epithelial cells produce similar cells. The only means by which secondary deposits can form from carcinoma is through this transplantation or metastasis of carcinoma cells, which is facilitated by the peculiar anatomical structure of the tumor.

The parenchyma cells of a metastasis in the liver of an epithelioma of the tongue present the peculiarities of epithelial cells of the tongue. The flat epithelial cells proliferate among the polyhedral liver cells, which play only a passive part. I have observed a primary carcinoma of the liver with multiple secondary deposits. On cutting into these secondary nodules, which were scattered along the post-peritoneal lymphatics, a greenish-yellow fluid exuded which responded to the tests for bile, and the cells of these nodules were anatomically identical with the liver cells. At the last meeting of the German Surgical Congress, von Eiselsberg reported a number of cases of metastatic deposits from adeno-carcinoma of the thyroid. The metastases usually occurred in bone. But these tumors growing in bone presented precisely the anatomical structure of the original malignant adenoma of the thyroid. The cell arrangement was the same, and the alveoli were filled with the same colloid material as in the primary growth in the thyroid. Examples of this sort, showing that metastases of epithelial tumors repeat the type of the epithelial cells from which the tumor sprang, might be indefinitely multiplied. These facts speak against the parasitic theory of carcinoma and quite refute the doctrine of Adamkiewicz, which assumes that the characteristic neoplasma cells themselves are not epithelial cells but are parasitic bodies. It is hard to conceive how he accounts for these bile-secreting and colloid-material-secreting parasites. Furthermore, it is not difficult to make a section at the edge of a carcinoma, including some of the normal tissue, in which the normal epithelial cells may be traced as directly anatomically continuous with parenchymatous cells of the neoplasm. The same thing is seen in the adeno-carcinomata, so common in the stomach and rectum, in which the adenomatous cells merge into the carcinomatous cells.

The parasitic theory, if it be accepted, must be reconciled with the other malignant tumors and also with the benign growths which give rise to metastases and which have so much in common with carcinoma. The fact that the carcinomata are anatomically related through the endotheliomata and peritheliomata to the malignant sarcomata, on the one hand, and that they are allied through the adeno-carcinomata to the benign adenomata, on the other hand, places another difficulty in the way of this hypothesis.

This similarity may be further traced in the etiological factors common to all tumors, which may be spoken of as chemical or mechanical irritation or influences which hinder in some way the development of cells within their normal limitations. In scar tissue of the soft parts develop carcinomata or sarcomata ; at the seat of fractures appear chondromata, osteomata, or sarcomata; from chronically inflamed mucous membranes develop polypi, adenomata, or carcinomata, and so on, examples might be multiplied. Metastases are not confined alone to malignant tumors for multiple developments of chondromata, lipomata, fibromata, myomata, papillo-cystomata, and in fact nearly all tumors, benign or malignant, have been observed to proliferate in this manner.

It would be superfluous to multiply evidence showing etiological and anatomical features common to all tumors. If carcinoma has a parasitic origin, so then should we expect it in these other benign and malignant growths.

The most plausible of parasitic theories is that of the sporozoa. Its right to consideration as an etiological factor of carcinoma is, however, nullified by the fact that its champions are contradicted by a larger number of equally accurate observers. What one has called parasite the other has regarded as endogenous cell constituent. The doctrine of the bacterial cause is to-day quite unchampioned, and finally, the theory of Adamkiewicz is unnatural and illogical. The hypothesis of Cohnheim, though not histologically substantiated, still stands as accounting for many inexplicable phenomena; and the theories of Virchow, Thiersch, and Klebs contain much of the truth. In view of these facts we must still regard the new growths as either belonging to the class of misdevelopments or as being due to some cause exciting the fixed cells to a greater than normal activity.

To prove that a certain parasite is the specific cause of a disease three conditions must be fulfilled: The peculiar parasite must be present in all cases of the disease; the parasite must be isolated from a case suffering from the disease; it must be transferred to some susceptible organism and produce a similar disease characterized by the presence of the same parasite. With carcinoma not even the first of these conditions has been complied with. Even though the peculiar bodies described in connection with the disease should some day be proven to be parasitic, it still remains to demonstrate their etiological significance. And if there are specific parasites for carcinoma, they must possess a predilection for epithelial cells, be transmitted by the cells to the localities in which metastases develop and yet not invade the cells of this new locality even though they be epithelial in character.

The fact that these bodies are found so abundantly in non-carcinomatous structures adds still another obstacle. We well know that bacteria are found in carcinomatous growths, yet we are not inclined to regard them of any etiological importance.

As a bacterium is primarily the cause of epithelioma arising at the seat of a lupoid ulcer, and as still another parasite bears the same relation to carcinoma springing from epithelial structures the seat of an eczematous inflammation, so, too, may the coccidia or other parasites be regarded in this sense as having an etiological relation to carcinoma by supplying the irritation which originally excites the cells to abnormal proliferation. The further growth, as evidenced by metastases, is independent of the parasite, and is simply a transplantation of the tumor cells in a new locality. It can not, therefore, be demonstrated that a specific parasite bears the same relation to carcinoma as the tubercle bacillus, for example, bears to tuberculosis, or the actinomyces to actinomycosis.

Finally, that carcinoma contains bacteria and possibly other low organisms can not be disproven, but that any particular organism stands in a specific etiological relation to the disease, in the presence of our present knowledge of the subject, is not a tenable theory.

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GYNECOLOGY AND OBSTETRICS AMONG THE ESKIMOS.

BY FREDERICK A. COOK, M.D.,

Surgeon to the Peary Arctic Expedition.

An informal talk to the Brooklyn Gynæcological Society, Jan. 5, 1894.

Nothing gives me greater pleasure than to come before you to-night to give you some of my experiences in the Arctic regions, and to tell you a little something about those most northern people. Thinly scattered along the northwestern shore of Greenland is a small tribe of Eskimos who are known as the Arctic Highlanders. These people are isolated, so much so that never within the knowledge of the oldest of those living have they had any regular communication with either the civilized or uncivilized world; they are hemmed in by gigantic walls of ice. They are not able to penetrate farther north because of the great Humboldt Glacier, which is nearly fifty miles in width; they are not able to cross the waters of Baffin's Bay in their frail skin boats, called kyaks; they are not able to penetrate farther south because of the almost continuous line of glaciers at the head of Melville Bay, which is, as you know, still unexplored. They will not go into the interior because they claim that the interior of Greenland is infested by mammoth animals, gigantic men, and all sorts of superstitious spirits, and they claim that the spirits of their departed friends also inhabit the interior of Greenland. These people are the most northern people on the globe. I do not believe that any people will be found farther north, although the region from the eighty-second parallel to the pole remains unexplored; but in that region along the northern border of Greenland there have been found no remains of human habitation. The temperature of the atmosphere which surrounds this region of Greenland for about nine months of the year is below the freezing point, and for about six months of the year it would range from 20° to 50° below zero; however, there are two or three months in summer when the temperature is fairly mild at the sea-level; in the interior it snows more or less continually, and from week to week and month to month the air is filled with snow. This great accumulation of snow is by cold pressure formed into ice, and this vast accumulation at certain parts of Greenland reaches a depth of a mile or more, and this ice is slowly forced out to the sea and there we see the ice in the form of glaciers coming down the valleys. These glaciers discharge mammoth pieces which are called icebergs, and these slowly come down to the southern seas.

With this short description of their land, I will next begin to tell you something of the people. They are a people short in stature; they resemble the Mongolians in many respects, but their habits and customs, their language, and almost everything else differ widely from any other race of people we have any knowledge of at present. The men are five feet one and one-half inches in height—that is, the average—and the women are four feet eight inches; however, men can be found that are five feet five or six inches, as well as women who are five feet; but they are few. The average weight of the men is 135 pounds and that of the women 118 pounds. These people have nothing to eat but what they get from the animal kingdom. Their only food is meat and blubber. It is commonly supposed that these people drink fat very much as we do water, and most of us, I think, have been taught that in the schools. This is not the case. They do eat some fat, but they eat it about the same way that we eat cheese, taking small pieces between times. They drink the blood of the animal largely, and the only cooked food or meat they have is that which they cook for the purpose of getting the blood out of it. They eat large quantities of this meat and two-thirds of it is raw and frozen, and here we have a little tribe of people that use no salt—no common salt—or no condiment of any kind, taking their meat simply as they get it from the animal kingdom, without any further preparation.

They dress entirely in the skins of these Arctic animals and the blubber of the animals forms their fuel. Perhaps you will be interested in knowing the kind of animals found here. The animals which are of the most importance to the Eskimos are the seal, walrus, and narwhal. These are the three animals from which they obtain nearly all of their food, fuel, and drink; they occasionally get a whale, but not very often in this northern region. On land and on the sea they obtain the polar bear; on the land they obtain the deer, the fox, the Arctic hare, and occasionally a wolf. All these animals are used to eat and their furs are used for clothing. During the summer, for about two months, many of the birds which are seen along the coast of Maine, Labrador, and Newfoundland go up there to breed; so during the summer months they can get any quantity of birds, in fact, they are so abundant that they can catch them in nets. These birds they use for their underwear, and the muscular tissue of the birds is used as food for the children. The older people claim that it is only good for the children, and they are superstitious about certain kinds of birds. The eggs are not allowed to be eaten by any except women who have had five children, and such are rare.

The point that would be of most interest to you regarding their life was a matter which I was not permitted the pleasure of witnessing—the birth of a child. I was told many times how it took place, and I can tell you their customs regarding it and what they do. Girls there menstruate rather late; they do not menstruate till they are nineteen or twenty years old, but they are married at twelve or thirteen years. They do not mensturate during the long

Arctic night, and that is an important point. During the days and months of continued darkness, which is four months in this region, the women do not menstruate, and if they are taken sick at this time with almost any disease, they claim it will be all right when the sun returns and their menstruation reappears.

The Eskimo women are fairly prolific ; they average about three children to every family. There are perhaps some customs regarding marriage that I should, perhaps, tell you in order that you may understand the importance with which they regard a mother. Women that are childless, that have proven sterile, are cast aside at will by the husband. There is no bond of marriage unless a child is born, and as they are married when they are twelve or thirteen years old, this gives a period of six or seven years of experimental work, and after they have been together for a long time and a child is not born, the woman is exchanged. She wanders about from place to place, and man to man, until she succeeds in getting somebody who will take care of her for a while, and usually she will have a child some time with some man, so very few of these women prove sterile.

Now about the birth of a child. The Eskimo woman, when she is about to become a mother, is put into a stone house, if she is where a stone house can be obtained ; if not, she is put into a snow house ; but if it occurs during the summer she is put into a tent made of skins, and here she remains all alone ; she has no help or assistance of any kind from anybody. When they think she is about to become a mother, she is practically locked into the house. They give her enough food to last her for two or three weeks, and this is cut up in pieces so she can eat it without having to cut it. She goes on, she has the baby, and she cuts the cord with a stone, by simply grinding it between two pieces of stone ; she then ties the cord with a piece of sinew. All this work is done by the woman herself, without any assistance whatever, and after the child has been born about a week, after everybody knows outside by the crying of the baby that it has existed for a week, then the house is again opened, and she begins to receive her friends, but for some time she is considered unclean, and men will not even enter the house.

With this rather rough custom you would naturally suppose that there would be a great many deaths, and this is the case ; there are a great many women who die from childbirth. These people, although they are said to have their children easily, and are said to have a child in no time, every one of them complains that they have a great deal of trouble, and that there are a great many of them that lose their lives. I can remember three instances that occurred within two years where women died from childbirth and the cause was peritonitis.

Now about abortions. This is another element of ridicule, for an Eskimo man will have nothing to do with a woman that aborts, and if it becomes known, it is the common talk of the tribe, so few of the women abort; in fact, there was only one case in that whole northern tribe that I heard of that ever had aborted.

This tribe of people numbers but 243 men, women, and children. There are, according to the statistics that I took, about 105 female children to every 100 male. The mortality among the children is rather small compared to ours. The diseases which the children have are few. One is measles, and when they have an epidemic of measles it is very severe in these northern regions. It does not occur often, but when it does it is apt to take off a number of children. The child is nursed by the mother for five or six years; I saw children tall enough to stand up and suckle in that way. Then, the diseases among the older ones are indeed very few. About the only diseases of any consequence among these people are rheumatic complaints in one form or another, and that in turn gives them cardiac affections; but aside from that they have very little to complain of. They had a mild form of la grippe in 1891 and 1892, but we had it very much more severely, and nearly all the members of our expedition were taken down with la grippe early in 1892.

When we came a little farther south to the South Greenland Eskimos, then these conditions changed. Here they have been in contact with civilization; they have had among them missionaries, and they take better care of the children and better care of the mothers; but while they do this they introduce other customs which are rather injurious. They introduce, for instance, civilized clothing, which is almost useless in these northern regions; they introduce whiskey, tobacco, tea, coffee, sugar, and all these things are equally destructive to Eskimo life and happiness. An Eskimo is not satisfied with one cup of coffee, but will drink eight or ten, or in fact will drink as long as he can get it. Now, many of these people are pretty wretched; indeed, the Danish doctor at Godthaab says he thinks two-thirds of the South Greenland people have tuberculosis in one form or another. All this is due to the influences of civilization. With the small tribe of people in the north of Greenland, they have not a single case of tuberculosis. Again, in the south of Greenland la grippe proves very fatal, so that thousands of lives are lost there every winter. It has been raging there for the last three winters successively.

I think there would be nothing further that I can say in the way of their diseases except their theory regarding the diseases. They believe that sickness is caused by an evil spirit, and they have among them a certain class of men that they call Angekoks. These men are in some respects like the Medicine Men of the American Indians, but they have no medicine ; there is no way of obtaining medicine in that northern region. The only forms of vegetation there are lichens, some forms of moss, and a few wild shrubs, such as willows and poppies, none of which reaches the height of more than two or three inches. These men by a series of incantations or howling and screaming, and by almost anything that will cause excitement, claim in this way to cure disease. It is a sort of faith-cure in another form. Their superstitions regarding this great spirit are perhaps a matter of interest. They believe that this great spirit, whom they call Turnahuchsnak, is all powerful and in many respects he is a convenience, for they ascribe to him everything that they cannot explain. For instance, there was a woman who was called Manee, and she was our principal friend around winter headquarters ; she told me repeatedly that this great spirit had devoured her little sister. I listened to the story so often that I began to be interested in the matter and cross-questioned her. I found that at the time the little sister disappeared was the time of a famine. The family were isolated from the rest of the people, so that the nearest other Eskimos were nearly 200 miles from them. The water was frozen over very early, so that they were unable to obtain walrus or seal ; consequently they were left without food ; they had deep snow early in the season and were nearly two weeks without anything to eat. Then the father disappeared with this little girl, going round a certain cape, where they claim to hear the voice of this great spirit. The noise of the winds coming down in the ravine causes a peculiar sound, and this they claim is the voice of the great spirit. The father went there with the little girl ; he returned with her dead and cut up in pieces ; he said that the great spirit did it. This gives you but one instance of how they use this great spirit. There can be no doubt but that the father did this and brought the little girl home as food to prevent the rest of the family from starving. This is only one case, and there are two or three others which are similiar to it. These people are not cannibals; they do not eat human flesh from choice, but they will do what a white man under the same circumstances would. When starvation threatens these people the old women, as well as those unfortunate childless women, are turned out to starve, and as soon as they starve their bodies are eagerly devoured by the other and more useful members of the tribe. These famines are not very common occurrences. They occur perhaps once in every ten years, but when they do occur it is a well-known fact that the people do these things.

The anatomical peculiarities of these people are very interesting. Their skin, as you see, is a sort of bronze color. It is less porous than our own skin and the functions of the skin are not so active in these cold northern regions. Their blood supply is very much more liberal than ours, so that when one of these Eskimos is cut, even a very small abrasion will bleed for hours, while if one of the members of the expedition were cut he would hardly bleed at all, because the extreme cold causes the blood to retreat from the skin. It does not do this with these people; they are so full-blooded that the least excitement causes the blood to flow freely from their mucous membranes. Beneath their skin and encircling their whole body they have a layer of fat or blubber, which protects them from the extremes of temperature in the northern regions. This is indeed a very interesting peculiarity. Their muscular development is fairly good for a people who do not exercise much. The intestinal tract is rather an interesting subject. These people eat but one meal a day; they begin about four o'clock in the afternoon and continue eating for about four hours and then go to sleep. During this time I have known them to eat five pounds of meat, and have heard others say that they have seen them eat fifteen or twenty pounds; but I have not witnessed anything like that. In the morning when they rise—it is not exactly morning because they would sleep during a time that would correspond with us from twelve o'clock midnight to twelve o'clock midday, taking meridian time—but when they rise in the morning they eat nothing, and if they have before them a journey of ten, fifteen, or twenty miles, they will wait until they get to destination before they eat. They claim that it is peyoungitor (not good) to eat and to travel on it, and treat their dogs in the same manner; but dogs are usually fed only once every second day. We found by experience that if our dogs were fed at the end of the journey we could get much more work out of them.

To continue with the anatomical peculiarities, and about the abdomen. The abdomens of all Eskimos are very prominent. I was not afforded the opportunity of measuring the intestinal tract to get its length, but their food being entirely animal I should imagine it would require a larger intestinal tract or a greater surface for absorption. Whether this is true or not their abdomens are certainly very prominent in the lower regions and it would seem to indicate that.

Now about their eyes. These people have brown eyes invariably and dark hair; there is no difference; in fact, they are a homogeneous race. Even you will notice in this boy that the eyes are not oblique like those of the Mongolians, but rather straightly set. I noticed a peculiarity about the eyes which I discovered by accident. I had noticed that the Eskimos who came to us and were handed picture-books invariably turned them upside down. I gave one of the men a lithograph of an actress, which he took to his house, and a few days afterward when I went to his house I saw it there hanging upside down. This amused me and interested me so much that to every new-comer I handed an illustrated book. Of course, they knew nothing of printed matter, never having seen printed books or papers before; they all held these pictures upside down. I asked them to draw for me the images of animals, and these they drew upside down. The conclusion that I came to was that they had not yet been taught picture-writing as we had, that they simply held these pictures in such a way that the images would be transmitted to the retina in the reverse position, and in that way they would more readily grasp the idea. We all know that the image is transmitted to the retina in a reverse position. These people I believe are no exception to the rule, yet I had never heard of this strange peculiarity having been discovered before among aboriginal people, and yet it must be the case among other tribes. While travelling along the coast of Labrador last summer I saw some of the Mountaineer Indians, and they presented the same peculiarity; but the Eskimos along the coast of Labrador who have had missionaries among them did not present the same characteristic, and I have tried the experiment, since returning, with very young civilized children, and found in a few instances that they did the same. I have simply offered this as a suggestion; you can think the matter over and I have no doubt you will find food for thought in it.

Now, gentlemen, I have tried to bring before you in a few words the interesting matters of Arctic life. I have no doubt that many of you have thought of other things, and after I get through I will be glad to talk with you, and have you question me about certain things or certain peculiarities of these people. I have brought with me a boy who is now sitting in the rear of the room. He understands English a little, although he cannot speak it. If any of you care to examine him he is here at your disposal.

The Chair: I am sure I voice the sentiments of the Society when I say how much we are indebted to Dr. Cook for the very interesting and instructive evening he has given us, and I hope that the members will feel free to ask any questions, which the Doctor has so kindly offered to answer, regarding the peculiarities of these people, especially those that pertain to our subject—Obstetrics and Gynecology.

Dr. Raymond: There is one interesting point about which I should like to ask Dr. Cook. With us here we expect a cessation of menstruation during the whole of lactation. I would like to ask the Doctor what the fact is among Eskimo women, inasmuch as they nurse their children up to the fifth and sixth years, at what period of lactation does menstruation return—whether it is absent during the whole of that time or whether it comes back earlier. I ask this with the idea of ascertaining whether there is that relationship between lactation and menstruation which is the belief among many.

Dr. Cook: This is a matter on which I examined the people very carefully, and as nearly as I could find out, they vary considerably. Some women never menstruate during the time of lactation; a great many, and in fact most of them, would menstruate after the first year. That is all I noticed in that respect.

Dr. Kortright: Do they ever have any twins?

Dr. Cook: Very rarely; I could get the history of but one case of twins and in that case the woman died.

Dr. Kortright: Then you do not know whether they pursue the custom of aboriginal nations, of destroying one of the twins?

Dr. Cook: I do not know, but there is a custom of destroying young children. If the father and mother die, any child remaining alive under the age of three years must also die, which is done by fastening a piece of seal thong about the neck, which is tightened till the child is strangled: but about the twins I was unable to get the history of but one case, in which both twins died soon after they were born and the mother also.

Dr. Chase: I would like to ask Dr. Cook if he has any theory to offer concerning the absence of menstruation during the period of darkness; whether any theory has occurred to him by which he could explain the phenomenon.

Dr. McNaughton: Do these women become pregnant during the period of darkness?

Dr. Cook: These people are rather like animals. The sexual desire is a periodical one, and it does not occur to any great extent until after the return of the sun. During the whole of that period of darkness, which in this region is four months, all of the senses are more or less blunted, but just as soon as the sun returns, these women and the men fairly quiver with the sexual excitement, so that most of the cases of conception take place soon after the return of the sun every year. I tried hard enough to trace some one case where it had taken place during the period of darkness, but I could not.

Now, about the theory regarding menstruation. I noticed that among ourselves after the return of the sun we had a yellow or jaundiced appearance. Our muscular power during the continuation of the Arctic night was reduced to one-half of what it would be after the return of the sun. If we walked two or three miles we were exhausted and would perspire freely and come home to drop down tired out, and would fall asleep easily, so that this shows that there was less muscular power; our condition was that of chloro-anæmia. The Eskimos seem to undergo a period of partial hibernation, if I may put it as such, during the period of the Arctic night. They eat little, they exercise little, and they sleep a great deal of the time, and that is perhaps the only explanation that I have to offer; that the reduced muscular power and chloro-anæmic condition caused by the absence of the sun would not permit of menstruation.

During the summer months the Eskimos travel a great deal; they move about from place to place in search of food or game, and then their sexual desire becomes less and less as the summer progresses. When the winter sets in, darkness does not begin suddenly; for about two months there is first a disappearance of the sun for only a few minutes, the next day it is double that time, and the next day it is double that time, so that the sun very rapidly disappears; but it takes two months before it entirely disappears. Then the gloom of the Arctic night sets in, and although the Eskimos spent their time telling stories and legends and tried hard to amuse us, I could notice a depression among ourselves, as well as among the people, and that reached its climax about Christmas; and although we had a very good Christmas dinner and everything we could wish for in the way of food, we were all very blue, and this was the only part of all my Arctic experience that I found disagreeable. I never suffered from the cold and none of our party did; but I have drifted off from my subject.

Dr. Kortright: Then I suppose that nearly all of the conceptions occur at the same time. About what time would that be?

Dr. Cook: About Thanksgiving time.

Dr. McNaughton: Is the period of gestation the same?

Dr. Cook: It is the same as with us; I could notice no material difference.

Dr. Jewett: The Doctor made some allusions to difficult labor, especially the question, which is an interesting one, in regard to the shape and size of the head among these people in its bearing on the ease or difficulty of labor. I would like to ask the Doctor if this boy before us is available for any demonstration of the anatomical peculiarity to which the Doctor has alluded.

Dr. Cook: Yes, sir.

About the difficulty of labor. The Eskimo skull is wider than that of the white man and it is nearly circular in shape in small children. The pelvis of the Eskimo women is considerably smaller than that of the Caucasian; that would be the only explanation that I would have to offer in the way of difficulty. I do not think that they have an inordinate amount of difficulty; I simply suggested the fatalities among them because it has been reported that all aboriginal people have children freely and without any difficulty, and that is not the case with these people.

Dr. Raymond: There is another question I would like to ask Dr. Cook—whether he is able to throw any additional light on the subject of the so-called difference between the male and female type of respiration. Of course, you are well aware that the text-books tell us that abdominal respiration is characteristic of the male and costal of the female. You are also aware that Dr. Mays, of Philadelphia, who has made a study of the American Indians, and many others beside him, tell us that the statements made in text-books are entirely incorrect, and that their observations show that there is no difference between the male and the female, provided that civilization does not come in to hamper the female with the modern corset. Can the Doctor, perhaps, give us some information on this point?

Dr. Cook: I had thought of that and observed it very carefully. I was assigned to the duty of the study of these people from an ethnological standpoint. I made it a rule that they must be stripped, photographed, measured, and examined, and on the ethnological blanks I put down their respirations. I found out of forty-one or forty-two women only two cases of thoracic respiration and in one other case, which was doubtful. All of the others were abdominal, and this I think shows that matter pretty conclusively. They have no corsets or nothing about their stomachs which would prevent its distension. Their trousers are very short and come to a little above the knee; all the women wear trousers made of seal and fox skins and their coats are wide and give their abdomens lots of room.

Dr. Raymond: Then there is no distinction between the Eskimo male and female as to respiration?

Dr. Cook: No, sir.

Dr. F. Baldwin: This boy's respirations are fourteen times to the minute as he sits there before us. Are their pulses more rapid?

Dr. Cook: Their pulses on the whole are more rapid. I think the average pulse of the men is about 76, and the women something like 83 or 84.

Dr. Raymond: Is the temperature the same?

Dr. Cook: Their temperature is one-tenth of a degree higher than ours. I found some a little higher than that, but they are all practically the same.

Dr. Jewett: The doctor alluded in his remarks to the occurrence of puerperal peritonitis. I would like to know if he has any theory to account for the puerperal infection. We know the present tendency is to ascribe infection to extraneous sources. Do these women interfere within the passages to assist the labor, or does the infection occur from the primary condition of the passages—auto-infection?

Dr. Cook: As a people the Eskimos are very filthy; a bath from birth to death is an unknown thing, so you see the conditions for the development of germs would be rather favorable. The women told me that occasionally they assisted the natural forces by the use of their fingers in bringing the head down; outside of that I heard of no other interference. There is certainly no one but the woman herself, and it is quite possible that she may become infected in that way; but there is so much filth and dirt around the people that I do not see how they can help introducing germs if there are any to introduce. There are germs in the North. I did not have the sterilized tubes to make these experiments as I would like to have done; we were hurried so I did not have an opportunity to get them; but the meat during the summer, and even in winter, will spoil very rapidly if left in the house. The temperature of these Eskimo houses, even the snow houses, would be up as high as 80°, and never below 70°, except right on the snow itself, and they have the snow pretty thoroughly covered with fur. That is all I can give you in the way of explaining the puerperal peritonitis. If the germs are there I think they will introduce them in one way or another.

Dr. Jewett: The doctor finds cause for infection from without. That does not go to break down our belief that clean obstetrics is indispensable to the protection of childbed patients.

Dr. Raymond: When the house is closed up during the time ot the woman's confinement, what is the temperature?

Dr. Cook: That I cannot tell, except they say it is warm. They keep a stone lamp burning all the time, and sperm oil or blubber is the fuel. They always keep their houses too warm to suit me, but they disrobe entirely while in the house.

Dr. Jewett: Does the doctor know of any observations upon the bacteriological flora of that region?

Dr. Cook: I do not. I have suggested to Lieutenant Peary that in his present expedition they take sterilized tubes and make the experiments. In Southern Greenland some observations have been made by doctors who are sent there by the Government, but I am not at present in a position to give you the results. I believe, however, they were published by the Danish Government in 1890. I shall try and secure a copy, and if I do I will send it to the Society.

Dr. Raymond: Is there a physician with Lieutenant Peary now?

Dr. Cook: Yes, sir.

Dr. Raymond: In reference to the use of alcohol in the far North, what is its legitimate use aside from cooking?

Dr. Cook: I do not believe it has any legitimate use. It has been reported by some explorers to be absolutely necessary. When we first went North many of the members of our party were in favor of a regular allowance of alcohol, but I strongly opposed it from the start. I held, as I believe is usually held by medical men, that alcohol is simply a stimulant, that it sends the blood and with it the heat out to the skin where radiation takes place, and would take place much more rapidly under the influence of the stimulant than it would without it, so that after the stimulant had expended itself it would be impossible to keep warm without another dose of whiskey. Taking this view of the matter, I opposed the use of alcohol at any time except on state occasions, on birthdays and holidays, or those days when we thought it necessary to have a celebration.

Dr. Raymond: Does the doctor find use for it when the food supply is diminished? would it not come in there in small amounts to supplement the food supply?

Dr. Cook: I did not have an opportunity to test that matter.

Dr. Raymond: What were the views in the Greely expedition?

Dr. Cook: They claimed that it supplied them with fuel for the body. Whether it does or not I am not in a position to say, for we had food enough during all of our time.

Dr. Jewett: I notice the layer of blubber to which the doctor alluded does not seem to be pressent in the individual before us.

Dr. Cook: This young man is from a more southern latitude—from Labrador—nearly 2,000 miles south of the people I have been talking about. He is part of the Eskimo stem, but not of this most Northern Greenland tribe. He has a good deal of blubber on him, but it is not so well marked in the boys as in the girls.

Dr. Emery: How old is this boy?

Dr. Cook: Fifteen years old.

Dr. F. Baldwin: Does the warm weather affect him disagreeably?

Dr. Cook: Yes, sir; when we have a day that is warm he complains of the heat, and when we have a cold day he complains of the cold.

Dr. L. G. Langstaff: What is the average duration of life among these people?

Dr. Cook: That is difficult to determine. An Eskimo does not remember his age after he is ten years old, claiming that it is not good to remember his age after that; furthermore, an Eskimo cannot count more than his fingers and toes; there he stops—at twenty. I was able to establish a period, and that was the time when Dr. Kane was there in 1853. I found one or two individuals who had seen Kane, and knew how old they were then, and from that I figured the ages. The average age as near as I could determine it would be about forty, and you see that would come pretty close to ours. There were many people of a fairly good old age, especially among the men, not so many among the women. I counted out of this tribe of 243, at least ten or eleven men who were past sixty years of age and three or four who were past seventy. That is as accurate as I could get at their ages.

Dr. MacEvitt: I would like to inquire whether there is any syphilis in the higher Arctic regions. I recently talked with a physician from one of the more southern latitudes who claimed that it was almost universal with the women there.

Dr. Cook : There is absolutely no syphilis or anything allied to it in these Northern people, and indeed very little in the Southern people at present. A few years ago there was a cleaning out at Ivigtut, one of the most southern settlements. This is a mining station where cryolite is obtained, a good many vessels going there, the Danish Government taking the women away and isolating all the syphilitic cases, and from the physicians whom I saw in Southern Greenland—and they have Government physicians there—I learned they had but two cases of syphilis in all Greenland at that time and these were isolated. But in Labrador it is not that way ; there syphilis is common, and as you go further up where the whalers go it is almost universal among those people.

Dr. Jewett : The Doctor has mentioned the fact that the women sometimes die during childbirth. What do they do for a substitute food for the infant when the mother dies in a region where the supply of food is so limited ?

Dr. Cook : If the mother dies before the child is three years old, the child must also die ; if the child is more than three years old they will feed it on meat and other natural food, blood and such material, without any vegetable diet whatever.

This strangling of the child is done when the husband dies as well as in the case of the wife, so it is not alone because the child is apt to die of starvation.

Dr. Madden : Do the women marry again ?

Dr. Cook : Yes, as soon as they can get a husband. The women claim that when the husband dies and leaves them a young child it prevents their chances of getting another husband, and that is one of the reasons they give for destroying the child.

Dr. MacEvitt : Were you able to determine the existence of genito-urinary diseases there ?

Dr. Cook : I saw none of any kind—indeed I heard of none among the Northern people, and among the Southern people I did not go so accurately into the details of life.

Dr. Chase : I would like to inquire what the moral sentiment of the people is regarding the obligation of the married state.

Dr. Cook : As a general rule these women are very faithful. Occasionally in times of a feast the men will be liberal to each other and exchange wives, but it does not very often occur. This fact is not true where these people have had a taste of civilization. As soon as they have once had sexual intercourse with white men, so I am told, they are lost, and women will sell their virtue for almost anything; so much is this the case that, as I told one of the gentlemen before the lecture, along Cumberland Gulf and Baffin's Land on the American side, where the whalers frequently go, as soon as the natives sight a vessel, forty or fifty women will go up to the ship's side in boats and the officers of the whalers will select the best looking ones and take them to the officers' cabin, and the others will go down to the forecastle. These are the people among whom syphilis is common.

Dr. Jewett: Dr. Cook does not need to be told that this Society is interested in major gynecology. These women must be subject to many of the pelvic and abdominal growths which sometimes afflict their civilized sisters. It would be interesting to know what becomes of them.

Dr. Cook: Of the forty odd women I examined I did not notice or hear of a tumor in any member of the tribe; but I do not wish to have it understood that there are none among them, for I do not consider my observations complete in that direction. I stripped forty women and examined them carefully for all those things and found no trace of tumors of any kind. I asked them questions about their mothers and fathers and departed friends, but could hear nothing of any of those tumors of which you speak, or tumors of any kind, except occasionally a glandular enlargement.

Dr. A. H. Buckmaster: In regard to putrefaction, I have seen it stated that when an animal is killed in the Arctic region it is necessary to remove the viscera at once or decomposition takes place rapidly and the meat is unfit for food.

Dr. Cook: It is with some animals, like the musk oxen; not because of decomposition, but becasue of the peculiar odor which is imparted to the flesh, which is not from decomposition, but from the viscera. It is also the same with the walrus. The natives eat the contents of the intestinal tract of the seal and the walrus, and even the contents of the stomach of the reindeer. That is probably the only bit of vegetable matter they get.

Dr. Kortright: How large is the Arctic hare?

Dr. Cook: About as large as our jack rabbit and the fur is very bushy and long.

Dr. Chase: In order that we may all participate in an expression of satisfaction with what the Doctor has said, I move that we return a vote of thanks to Dr. Cook for his very instructive and interesting remarks. Seconded and adopted.

NEUROTIC (REFLEX) ECZEMA.

BY GEORGE DEDERIC HOLSTEN, M.D.,

Dermatologist to the Brooklyn, E. D., Hospital, Physician to the Brooklyn Throat Hospital,
Department of Dermatology.

The object of this paper is to present to your attention a cutaneous affection which, while presenting all the classical features of eczema—that is, of a catarrhal inflammation of the skin—will yet show these features arranged in a certain peculiar way, or combined in such a manner, as to divide them into a group separate from the rest.

This form of eczema, to which the term "neurotic eczema" has been applied, not only differs from all other eczemas in the clinical picture it presents, but also in its etiology and in the means to be adopted in its treatment.

It occurs with the greatest frequency in childhood, generally during the first year and a half to two years of life, although it may be met with at all ages. The oldest patient of whom I have record was nearly seventy years of age.

The main features which distinguish neurotic eczema from other forms are location, symmetry, tendency to frequent and rapid remission, and aggravation, and if to these are added its rebelliousness to all external treatment, while meeting etiological indications, will be followed by rapid relief; then we have a group of symptoms to which considerable importance should be attached.

In children the most frequent location will be found on the face, that being the first and sometimes the only part of the body affected, and when the eruption is profuse the face will present the appearance of a mask from which the eyes, nose, and mouth have been cut. Next to the face the scalp, either the whole or a patch over the anterior or posterior fontanelles, will be affected.

Next in frequency come the upper extremities, affecting the extensor sufaces only, and most usually as sharply circumscribed patches occupying the regions over the deltoid and triceps muscles and over the entire back of the forearm. On the hands circumscribed patches will cover the backs, and the shafts of the phalanges, usually omitting the joints.

In adults the general distribution and grouping of the eczematous patches will be nearly the same as in children, the scalp, however, being less, and the extremities more frequently affected. This tendency to avoid the flexor surfaces and confine itself to the extensor surfaces is a noticeable feature of neurotic eczema as compared with other forms of eczema.

Unlike zoster, to which this cutaneous affection shows many points of relationship, the lesions are not scattered along the course of the nerve trunks, but are more inclined to group themselves either at the decussation of nerves or over an area to which the final terminal filaments of a cutaneous branch are distributed.

The individual patches are generally circular, elliptical, or ovoid. The edges are always sharply defined, not gradually becoming diffused into the surrounding healthy skin as is the case in ordinary eczema.

The surfaces of these patches show all the multiple features of any eczema—papules, vesicles, oozing, crusting, etc., with a preponderance of vesicles and oozing ; the serum drying into thin, sticky crusts, which on removal show the typical weeping surface of eczema. Oftentimes the patches have only a slight papular or dry, scaly appearance. The borders of patches, however, almost always show vesicles.

One of the most noticeable features of this type of eczema is its symmetry. Corresponding portions of the body will be involved, including and covering the same area and usually of the same degree of intensity. When the face is the seat of the disease, both cheeks will present exactly the same appearance. On both forearms, or hands, or wrists the distribution of the lesions will be seen to be identical, as are also the shape of the patches and the grade of inflammation present.

The skill and patience of the physician will be taxed to the utmost by the next prominent symptom—the tendency to relapse. In all other forms of eczema progress, whether toward recovery or otherwise, is a comparatively slow one—one to be measured by days. In this form the changes take place with astonishing rapidity. A case will show all the evidences of going on to recovery: vesicle formations cease, moisture and weeping disappear, redness becoming less and itching abating, when suddenly, in a very short space of time, all the symptoms will return in their full severity. Improvement also usually takes place quite rapidly. This tendency to relapse is quite characteristic and occurs many times in the course of the disease. It was very well shown in the history of one case to be mentioned.

As the disease improves it does not do so by the gradual diminution in the size and extent of the patches, but by a decrease in its severity as a whole, the entire patch fading down until it assumes the appearance of normal skin.

The skin between the individual patches will have the normal appearance. There is none of that extension of an inflammatory areola shading off from the patch for a greater or less distance; the lesions end abruptly.

Under various etiological heads I have grouped the cases as I have observed them, some of which I here report.

The most prominent of these causes has been some disturbance of the alimentary tract, occurring most frequently in children, especially in such as were artificially fed. It has also been observed in children at the breast, in those who had been weaned, and in adults. The food has been found to be improper in quality, not suited to the age or condition of the patient ; has been partaken of too often or in quantities too large to be suitably disposed of by the digestive organs.

From some sixty cases which have come under my observation, I have selected the following illustrative ones :

Case XLIX. (private practice).—D. H., aged six months. The eruption appeared quite suddenly on both cheeks when the patient was one month old. At my first visit both cheeks were covered with a large characteristic patch of neurotic eczema of dark-red color, sharply marginated from the normal skin, the surfaces, and especially their borders, studded with small, bright, rather tensely dilated vesicles, while in places oozing and crusting were present. The forehead had also become involved within the past few weeks and presented a reddened, roughened patch on which were a number of papules and visicles.

Baby was artificially fed, at first upon condensed milk, and it was while taking this that the eczema appeared : subsequently sterilized milk was substituted. This milk was prepared daily, sufficient for one day's feeding being made each morning, consisting of cow's milk, quite rich in cream, two-thirds and water one-third. To this mixture a certain definite quantity of milk-sugar and salt was added, four ounces placed in each nursing-bottle, properly sterilized, and the bottles then placed in an ice-box. When wanted, a bottle was warmed to the proper temperature and given to the child. A bottle of four ounces was given every two and a half hours.

Bowels were very costive and had always been so, although various remedies had been tried to overcome the constipation. About three weeks before seeing the patient, some medicine had been given for a short time which kept the bowels quite regular, and during this time the face began to improve rapidly. The passages were dry and hard, though without offensive odor; neither were they white or curdy. Unless taking some laxative a movement did not occur oftener than every two or three days.

The itching was quite intense. At times the baby scratched and tore her cheeks until blood appeared. The health otherwise was good. She was plump, flesh firm, skin where not affected by the eczema was cool, soft, and of normal color. She was bright and lively and slept well, excepting that the itching often caused considerable annoyance.

While writing the above notes in my case-book the baby received her four-ounce bottle of prepared milk. This was entirely consumed in a few minutes—in fact, gulped down. About ten minutes afterward I noticed that both cheeks, which had been of a dull-red color, were becoming brighter; soon little drops of moisture began to appear, and within half an hour after the feeding both cheeks and forehead were the site of an acutely inflamed, weeping eczema, from which drops of serum were trickling down on the bed. The mother stated that such phenomena were of frequent occurrence.

The diet was changed to six ounces of the milk mixture every four hours; a one-tenth grain calomel triturate was given every morning and frequent drinks of water during both day and night. Locally a soothing ointment containing carbonate of magnesia and two per cent. of icthyol was prescribed.

Four days later the baby showed considerable improvement. She now took some twenty minutes or longer to consume her milk (six ounces) and invariably left some in the bottle. Sleep was better, itching less, and the cheeks no longer showed the acute exacerbations after feeding.

Five days later she showed further improvement—slept all night and very little scratching during the day. There had not been any oozing from the cheeks for a week and the lesions were dry, scaly, and fading away. The diet was continued; calomel triturates continued and in addition fifteen mimims of P. D. & Co.'s cascara cordial given every evening.

The eczema gradually passed away, so that by June 13th the face was entirely cured. Three days later the eczema returned with its former severity. The bowels, which had been quite normal, had become quite costive again during the preceding five or six days and with this return of costiveness the eczema also reappeared.

A dose of castor oil was given, the cascara cordial increased in amount, and on the following day the baby was taken out of town. Two days later the eczema had entirely disappeared, to return some three weeks later, but for a few days only, when the child cut her second tooth. Since that time very particular attention has been given to the diet and the condition of the ailmentary tract, and no return of the eruption has occurred.

In this case the connection between the frequent administration of food and eczematous process was very obvious, so much so that the attendants had frequently noticed it. The marked influence of constipation and dentition to produce a relapse was also very noticeable.

Even in children who were nursed at the breast, costiveness alone was ofttimes sufficient to act as the causation of the eczema, and sometimes this eczema appeared to depend on costiveness in the mother, that being the only factor to account for the eczema, or, at any rate, correction of the mother's costiveness produced an improvernent in the child.

Case XXXIV. (E. D. Hospital).—Marie W., three and a half months. Came to dispensary April 26, 1892. Duration of eczema two months; located on forehead and cheeks. The child was nursed frequently and irregularly; it also vomited frequently and was very costive. General condition puny and badly nourished. The mother was very costive, anæmic, and also poorly nourished. Cascara sagrada was given to the mother and a two per cent. salicylic acid-zinc oxide ointment to the child. Careful directions regarding feeding were given, but neglected, and the child's eczema became progressively worse. Early in May the mother received in addition to the cascara a tonic of iron, arsenic, and nux vomica. By the end of May my repeated directions regarding the nursing of the baby began to be heeded; then the vomiting ceased, the bowels began to move from two to three times daily, and the fæces assumed a more normal appearance. The mother's general condition markedly improved.

On June 28th the mother kindly brought the child to me for inspection. Baby was plump, flesh firm and hard, skin soft, smooth, and pliable. Bowels were regular; slept well; was no longer cross and fretful, and altogether was a well child. The mother's health had also improved very much.

In this case nothing had been given to the child except some ointment. The entire treatment had consisted practically in looking after and improving the general health of the mother and in regulating the child's diet.

Cases of this type of eczema produced by improper food, improper feeding, or costiveness were not confined to children, but were met with in adults.

One case (Case XXV., E. D. Hospital) was of a girl of nineteen having an eczema consisting of papular, moist, and crusty grouped patches symmetrically situated over forehead and cheeks and rounded vesicular and moist patches on the extensor surfaces of the forearms. The eczema was due to an abnormal and capricious appetite, which led her to eat at all hours and of various things and to the consumption of large quantities of tea, of which she kept a pot constantly stewing on the stove. Local treatment proved ineffectual, the eczematous condition became progressively worse, until I finally succeeded in getting the girl's mother to exercise a strict supervision over the girl's habits. The treatment, briefly stated, consisted in giving three meals per day only, of mixed diet, at regularly stated hours, the prohibition of tea entirely, and sufficient cascara to secure two daily movements. Local treatment consisted only of oxide of zinc ointment.

One of the most curious and interesting as well as important factors in the production of this type of eczema in children were malformations about the genital organs of the nature of phymosis, adherent prepuce, etc.

Case LII. (Brooklyn Throat Hospital).—Henry W., aged eight months. Typical patches of neurotic eczema of four months' duration were located on both cheeks, forehead, and scalp, in character being papular, vesicular, scaly, and slightly moist.

On retracting the foreskin, adhesions were found existing between its inner surface and the glans. These were left undisturbed for more than a month, while certain irregularities in diet were corrected and constipation overcome. The eczema, however, showed no improvement, but became slightly worse. The adhesions were then gradually broken up, hard inspissated nodules of smegma removed and coincidently with this the eczema became better. The mother was directed to retract the foreskin every day and keep the parts clean and well oiled. This she did for a time, then it was neglected, and the eczema to a slight extent returned, to pass away again as soon as proper attention was given to the genital condition.

Conditions of the system resembling neurasthenia, produced by excessive mental work, grief, shock, pain, loss of sleep, etc., were also met with as producing this type of eczema. These occurred especially in elderly persons.

Case XLIII. (E. D. Hospital).—Maria B., aged sixty-nine. During her entire life she had enjoyed the best of health and had attended to the multitudinous duties of a large family. Eleven weeks before she came to the clinic a carbuncle appeared on the back of the neck; this had been lanced a number of times and discharged much pus. The pain, loss of sleep and appetite produced considerable deterioration in her general health, and five weeks after the appearance of the carbuncle (which was then healed) an eruption appeared on the neck and soon after on other portions of her body.

Condition on coming to the clinic: On the face the eczema involved the forehead and both cheeks, extending back to and including the ears. The nose and chin were perfectly free. The disease extended over the entire neck as low as the clavicles in front and the upper border of the scapulæ, behind where it stopped abruptly.

There were oval patches over the deltoid muscles, but the axillæ and remainder of the arms were free. The entire extensor surfaces of both forearms were involved, while the flexor surfaces were free, as were also the palmar surfaces of the hands and fingers, but on the dorsal surfaces of these latter were circular or oval patches covering the backs of the hands and the skin over the bodies of the phalanges, while the skin over the joints was free. Over the lower extremities the extensor surfaces only were implicated, the flexors being entirely free. The perfect symmetry of both sides of the body was very noticeable. The eruption was patchy, of oval or circular outline, the surface being vesicular, crusty, or oozing.

This patient had previously enjoyed good health, and were it not for the intense itching she would be able to sleep well. Her bowels were costive, but had always been so. There had been no recent interruption of the general, even tenor of her life, such as shock, loss of money, bad news, death, or anything, excepting the carbuncle and the subsequent poor health, to account for the disturbance of her nervous organism.

She remained under observation only about ten days, during which time the improvement was but slight.

One case (Case III., private practice) observed several years ago occurred in an elderly lady and was associated with profound agitation, muscular tremors, tachycardia, and a tense pulse not influenced by aconite. The eczema was located only on the dorsal surfaces of hands and fingers and on both ears in grouped patches, vesicular and weeping. Local treatment was without effect, and only after prolonged rest in bed with a milk diet did her eczema become better, synchronously with improvement in her general condition.

That these cases of eczema were dependent upon some disturbance of the nervous system there could be, I think, no question. The peculiar location, the symmetry, and the sudden changes in appearance of the lesions would point thereto, and adding to these the disappearance of the eczema, often quite rapidly, whenever certain irregularities in the functions of the body were corrected or irritations removed, then the etiological basis for this style of eczema would seem to be evident. That these disturbances were not organic in their nature—that is, due to a diseased anatomical condition of some portion of the nervous system which could have been found post-mortem—but rather that these disturbances were functional, would also seem to be evident from the rapid changes (relapse and remissions) of the cutaneous lesions.

Nor can these cases be regarded as having been due to the effect of external irritations, for such eczemas do not show the symmetry, the sharp margination, the peculiar location, and the frequent and sudden changes in appearance that made up the clinical picture in these cases. Such cases respond to the effects of external applications, while these cases were not in any way so influenced.

I should rather regard the cutaneous lesions in my cases as of reflex causation, the primary seat of the trouble having been in some distant portion of the body, and explain the reflex in the same manner as a headache produced by a disordered stomach or by some abnormal condition of the uterus or ovaries, or by comparing these cases of eczema with analogous affections, presumably neurotic in their causation and nature, as, for instance, asthma, epilepsy, hysteria, etc.

That these reflexes manifest themselves on the skin instead of some other portion of the body, I would explain by saying that the skin happened to be the organ whose tissue at that time offered the least resistance to reflex irritations. To enter upon a consideration of reflexes would be beyond the scope of this paper; permit me, however, to call your attention again to such affections as I have before spoken of—headache, asthma, epilepsy, hysteria, etc., as resulting from reflex irritations.

Whether these disturbances were due to some derangement of or conveyed through the vaso-motor or the trophic nerves, I am not prepared to say. Krock (*Berlin. Klin. Woch.*, No. 18) thinks that such irritations are propagated along the trophic nerves and that the special duty of these nerves is to watch over and control nutritive processes, while Crocker regards the vaso-motor nerves as affected.

Differential Diagnosis.—The location of the lesions involving the cheeks, ears, and forehead and avoiding the middle portion of the face, while on the extremities the extensor surfaces and not the flexors are affected, together with the symmetry, the remissions, and exacerbations, and the ofttimes grouped and sharply marginated appearance of the lesions, present a clinical picture which will readily distinguish this from other types of eczema.

Treatment.—The causation of these reflex phenomena must be diligently sought for and removed. This will in many cases, especially if the eczema has been of short duration, be sufficient, and the eczema will rapidly subside without further treatment.

In the larger number of cases, however, after all the functions of the body have been placed in the best possible condition, there will be found remaining a hyperæsthetic condition of the reflex centres, so that an exaggerated response to but comparatively slight irritations will occur. In these cases remedies of the character of nervine sedatives, as the bromides, antipyrine, etc., will be required. During the acute stage the itching is so intense as to imperatively demand measures for its relief and sedative local applications of salicylic acid, menthol, ichthyol, cocaine, carbolic acid, etc., with sedatives internally, will be of some service.

Nevertheless, in some cases, after every discoverable cause has been removed and sedatives have been pushed to their utmost, the eczema will still persist. In these cases ergot, both internally and locally, has been found of service. The ergot must be given in quite large doses, and for a long time. I usually begin with ten minims three times daily and increase the amount up to one drachm and have given larger doses. Locally I have employed the ergot fluid extract, made into an ointment in the proportion of from one-half drachm to three drachms to the ounce.*

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* For this local application of ergot the ergotine made by Sharpe & Dohme has rendered me very good service.

Crocker has recommended the application of counter-irritation over the spine by the use of dry heat, mustard, or blistering fluid, and states that the result was too immediate not to doubt the connection between cause and effect. In one case, an infant of six months, where the eczema had existed for more than four, during which time the child had never had more than two hours of continuous rest, the first marked impression on the disease followed the application of a strong mustard plaster to the nape of the neck. The application was made about six o'clock in the evening, the child slept quietly during the entire night, and the eczema showed considerable modification in its severity during the following day.

DISCUSSION.

Dr. Winfield: Dr. Holsten has left but little for discussion, although the subject is of sufficient interest to all of us to allow of additional emphasis. Professor Unna, of Hamburg, has classified eczema in children under three heads, viz., tuberculous, seborrhœic, and nervous. Unna and Crocker have done a great deal to bring this form of eczema before the dermatologist. Nearly all physicians have seen cases of neurotic eczema in children where the attack seemed to be produced or at least aggravated by digestive disturbances. I agree on the whole with the Doctor in treatment. I have frequently seen cases clear up after the digestive functions had been corrected. Externally I have found that the milder unguents act the best. Dr. Holsten deserves a great deal of credit in presenting this interesting subject to the profession, and the compilation is of great interest to the dermatologist. In closing I can simply say that I most heartily endorse the writer of the paper.

FATHERS OF MEDICINE.

We present to our readers this month the portraits of Martin Lister and Jean Astruc, both from the fine collection of Dr. J. H. Hunt.

Martin Lister, a physician, was born about 1658, at Radcliffe, in Buckinghamshire; was educated at St. John's College, Cambridge, but took his degree at Oxford, became a Fellow of the college, and of the Royal Society, and physician in ordinary to Queen Anne, and died in 1718. He wrote several medical works: "A Journey to Paris," which was burlesqued by Dr. King; "A History of English Animals," and other works on natural history, and contributed many papers to the *Philosophical Transactions*.

Jean Astruc, a French physician, metaphysician, and author, was born at Sauves, March 19, 1684, and died in the year 1766. He received his doctorat at Montpellier in 1705, and was a follower of the mechanical school of Boërhaave. He was gifted with a remarkable memory, and was also a prolific writer. Among his writings are the following: Memoire on the Causes of the Digestion of Foods, dissertations on Fistula in Ano, Hydrophobia, and the Origin of Epidemic Diseases, and a work on Obstetrics, besides many others on various subjects, medical and otherwise.

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EDITORIAL.

THE DEPARTMENT OF HEALTH.

Dr. Z. Taylor Emery assumed the duties of Health Commissioner of Brooklyn on February 1st. He has appointed Dr. R. M. Wyckoff, Deputy Commissioner, Dr. George E. West Secretary, and Alexander H. Van Cott, Esq., Counsel. We are indebted to the Brooklyn *Eagle* for the following biography of these gentlemen :

"Dr. Wyckoff, the new Deputy, is a physician of many years' standing, who enjoys an excellent reputation in his profession. In 1859 he was graduated from Amherst College with the degree of Bachelor of Arts, and shortly after entered on the study of medicine. He took his degree of Medical Doctor from Bellevue in 1864 and in the following year became Acting Assistant Surgeon on the United States ship Spaulding. After this service he took up the practice of medicine in this city, and in 1871 was elected Secretary of the Medical Society of the County of Kings, which position he held until 1882. In 1875, he became Visiting Physician at St. Peter's Hospital, and a little earlier was Assistant Sanitary Inspector of the Metropolitan Board of Health. He was a Sanitary Inspector in the Health Office of this city, and became Assistant Sanitary Superintendent in 1874, Registrar of Vital Statistics in 1878, serving until 1882, when he was appointed Secretary and Deputy Commissioner. The latter office he filled until 1886. He was one of the founders of the Brooklyn Pathological

Society and was at one time editor of the proceedings of the Medical Society of the County of Kings. Beside this he is the author of several works, including "Early Medicine in New York" and "Vital Statistics," and various treatises on meteorological, sanitary, and medical history and biography.

"Dr. George E. West is the new Secretary and resides at No. 360 Greene Avenue. Yonkers, N. Y., is his birthplace. He came to this city in 1871 and attended the public schools here, graduating from No. 11 in 1876. After graduation he entered the naval academy on a competitive examination, and after passing through the prescribed course was sent out with high honors in 1880. He was assigned to duty in the navy and remained there two years, when he returned to this city and began his medical studies at the Long Island College Hospital. In 1885 he graduated and served in the New York Hospital, St. Mary's General Hospital, and the Bloomingdale Insane Asylum. Dr. West has travelled very extensively in this country and abroad and has special qualifications for his position in view of the fact that he is entirely familiar with international and maritime law, and speaks English, German, French, Spanish, and Italian. He ranks well as a physician, and is both accurate and industrious. On April 27th he will be 32 years old.

"Alexander H. Van Cott, the new Counsel to the Health Board, is a son of ex-Judge Joshua M. Van Cott, and the junior member of the well-known law firm of which the latter is the head. Mr. Van Cott was born in New York City June 12, 1861. His parents lived there a year after his birth and then removed to this city, where they have resided ever since. He was educated at the Polytechnic Institute and later began the study of law at the Columbia Law School, graduating with honor in 1880, when he took up a practice as junior member of his father's law firm. The new Counsel is a true Brooklynite at heart and has done much to further the progress of her institutions. At the present time he is a director in the Young Men's Christian Association and the assistant to Justice Pratt as lecturer on medical jurisprudence in the Long Island College Hospital."

DR. J. S. YOUNG.

We desire to extend our cordial thanks to Dr. J. S. Young, the retiring Deputy Commissioner of Health, for the Vital Statistics of Brooklyn, which he has prepared for the JOURNAL since its foundation, in 1888.

PROCEEDINGS OF SOCIETIES.

BROOKLYN SURGICAL SOCIETY.

Meeting of October 19, 1893.

SCIENTIFIC BUSINESS.

Paper by Dr. L. S. Pilcher: "A Study of 208 Cases of Malignant Neoplasm."

Presentation of a patient operated upon for carcinoma of the upper jaw by Dr. Ottolengui.

Mr. President: It is a little out of my realm to come before you to describe a case, and I think it may interest you more to give you the previous history. I present here a rough cast which has not been finished up. It was taken twenty-four hours before the operation. When I first saw the case the swelling was in area only about one-third of the territory which it now covers, and it increased to the extent which you see in one week.

As well as I can make out, the disease started years back with a history of neglect. We find that an antral trouble of some kind had existed for over twenty years. The patient was asked how he knew that he had trouble at that time. He said several physicians told him so; that the discharge from the nostrils was of the nature of pus; yet nothing was done to get up into that antrum and clean it out. But in about May of this year this swelling started with some pain; he then went to a dentist in Sacramento, who said there was a necrosis of the superior maxilla, and he removed two teeth. Subsequently the patient drifted to New York. When he was brought to me I found no teeth back of the bicuspids; there was apparently a full process, but upon examination there was absolutely no bone; all of the alveolar process in that region had disappeared. I found a small opening through which a tiny tube could be passed, but it met with an obstruction which satisfied me that there was a growth completely filling the antrum. I opened it and curetted and made slides of some of these parts, obtaining some very beautiful specimens of sarcoma. Dr. Fowler operated, removing the whole maxilla and the floor of the orbit.

Before I take my seat I would like to make a suggestion or two, or ask a question. The first is, what do we know about the etiology of sarcoma? Here is a case that gives no disturbance, although there has been pus in the antrum for twenty years, and suddenly this swelling appears and in a few months destroys the whole bone.

Next, what, if anything, had the necrosis to do with it? Did the extraction of the teeth and the opening of this wound perhaps make the case more rapid by enlarging the area of infection?

But the main point is, can we in any way account for this sudden appearance of tumor after remaining in abeyance for so many years?

There is one little point I might mention. I suggested that the artery that runs between the two maxillary bones might be saved, and in removing the bone just a layer of it was left and the artery retained. The patient is forty-nine years of age.

Dr. Pilcher: I would say in the first place that the case illustrates the rapid repair which very often takes immediately following these operations for malignant disease. I fear, however, from the appearance of the patient now, that recurrence has already taken place in the temporal fossa. I saw him from time to time as he was in the hospital recovering from the primary operation, and it seems to me that there has already a positive development begun to show itself, and we have every reason to fear that the history of the case will be one of those which we too often have to record of continuance of the disease after operation, however careful and extensive the operation may have been, but nevertheless insufficient to remove the entire amount of disease present.

The case is interesting, further, from the history of it, as having had a malignant change ingrafted upon an inflammatory condition lasting so many years. It has seemed to me that the general drift of professional opinion is strongly now to the belief that whatever the immediate or direct cause of these malignant changes may be, still conditions of chronic irritation, subacute inflammation existing for a lengthy period, often are found to afford a suitable soil upon which the malignant change can be grafted, and if such is the case it would seem that this is simply one of that class of cases.

The very pertinent request from Dr. Ottolengui, who has watched this case and through whose interest it has been brought to our own attention, as to its etiology, is a question which continues to interest all surgeons, and which as yet as to its answer has been fruitless. We perhaps are not prepared to enter into the discussion of the possible parasitic origin of these diseases. I am willing to confess for myself that at the present moment there seems to be, notwithstanding the great amount of discussion which has marked the surgical world as to the etiology of these diseases, a very considerable want of positive knowledge with reference to the real cause of their development.

Dr. Lewis: I have nothing to add in particular. I cannot answer the questions, any more than to agree with the last speaker.

I would go a little further in regard to that cavity. I put my finger in the patient's mouth, for I have so many times seen this disease invade not only bone but soft tissue until I have seen it fill the whole mouth, and I should not be surprised to see that man's mouth suddenly filled up from what I felt in there. There is an evidence of soft tissue which doesn't belong there, and I wouldn't be surprised to see that most rapidly proliferate and fill up the whole cavity.

Dr. Warbasse: Dr. Pilcher has covered the ground in speaking of the etiology of this disease in reply to Dr. Ottolengui's question. There is no question, in my mind, but that this was primarily a simple inflammatory condition; that there has been no cancerous condition existing for twenty years or so; but that, whatever cause may be attributed, sarcomatous degeneration was ingrafted upon the tissues during these last few months in which it took on this rapid growth. We know that the large round-cell sarcomata are exceedingly malignant and of rapid growth; and this particular tumor may not have existed for any more than these few months during which the disease took on these rapid changes. It is a very common thing for malignant tumors to develop in tissues which are the seat of an inflammatory process.

Dr. Wight: I have found, as has already been remarked, that growths of this kind are exceedingly malignant. I have never seen a case in which operation has been performed that did not recur rapidly and death has ensued with greater speed, in less time, than those which have not been operated upon. I have seen cases that have been operated upon, and in all of them it seems to have shortened the life of the patient, and so I have not been inclined to operate upon these cases in recent years. I think I have prolonged life to a greater extent by medication than by any other means. I have in a few instances by ligation of the common carotid on the side of the growth arrested its progress.

Whatever is the cause of the primary irritation, the inflammatory condition, whether it be the irritant which causes sarcoma or not, I could conceive of the tissues of a healthy patient being in such a condition as to resist the encroachment of that disease for a long time, and then after this long time go on rapidly to a malignant form. But we all know that tissues that have been deteriorated will take on this new change more rapidly and definitely than normal tissues; some people will not have cancer; some will not have sarcoma; others will. I find there is a special condition of the cells of the body which takes on this change. I state this as my opinion, and whether I accede to the possibility of these new forms being caused by micro-organisms or not, the truth of this is well established. I incline strongly to the belief that these are due to some yet unfound special micro-organism. If you take that belief away from me, then I am thrown upon accepting a mechanical theory, and that to me is unreasonable and not very tenable.

I would say what I have said before here in this Society, without enumerating a large number of cases, but speaking of one in particular, a patient who came to me with an osteo-sarcoma of the left upper jaw involving the eye, in what I call the last stage of the disease, and in my experience such a patient would not live more than a few weeks or a very few months at most. I gave that patient for quite a long time one-tenth and one-eighth of a grain of bromide of arsenic three times a day and kept it up until the change came about. That patient after a year and a half had the whole tissue slough out and there appeared to be an effort to give us normal scar tissue. I continued the same treatment until she got tired of it, but at any rate she lived about two years and over in that condition. So I think that I can keep a patient longer alive and more comfortable this way than by operation.

I would venture to support the statement that this disease, while it may not have recurred, has never been fully eradicated, thorough as the operation has been. I believe that if every particle of infection had been removed the patient would have been cured. So I will put it in this shape, that I corroborate the statement made that this disease is recurring and is going on rapidly, though we would all be glad to be mistaken.

Dr. Ottolengui: I only feel tempted to say what probably is not at all necessary for me to say, and that is, that Dr. Fowler's operation, to my mind at least, was as thorough as it could be made. When that bone was taken out in the first place it was found that the tumor had escaped from the walls of the antrum by destroying the bone, and was firmly attached to the cheek itself so that the cheek had to be dissected away from the tumor. After the tumor was removed it seemed to me that Dr. Fowler spent very much time in going over all those tissues until when he had finished and the hemorrhage was controlled it seemed to be the most thorough operation possible. Of course, Dr. Fowler did not promise a continuance of the cure, but this disease was going so rapidly that it did seem as though he was authorized to operate. The man was suffering a great deal of pain all the time.

I would simply like to ask, if this is true, that there is a recurrence, what would be the prognosis; will there be any possibility of a cure?

Dr. Pilcher: I think the Doctor's question has been already answered.

Dr. Wight: I think it is the general opinion that it would be pretty difficult to make another operation there.

PRESENTATION OF SPECIMEN BY DR. WARBASSE.

Dr. Warbasse: I wish to present an appendix vermiformis, which I show, as a pathological specimen illustrating the manner in which the omentum may wrap about an inflamed appendix and tend to shut off any perforation.

The patient from whom this appendix was taken was seized four days before the operation with a rather violent initial attack of appendicitis. On the third day there was an especially pronounced pain, all the symptons being exacerbated.

On cutting down over the ascending colon, I found on opening up to the outer side of the colon there was no peritonitis in that vicinity. But upon exploring internally from the incision, the ascending colon was found adherent to the anterior abdominal wall. Upon opening through these adhesions between the colon and the anterior abdominal wall, thin pus came, not from any particular abcess, but from the general peritoneal cavity. Although there were numerous adhesions about the appendix, which was situated internally and anteriorly to its attachment, there was no shutting off of the pus, which had invaded the general peritoneal cavity. About the appendix was the adherent omentum. I removed the appendix with the omentum attached to it, and this specimen shows the organ with the omentum wrapped about.

Dr. Pilcher: Cases often go in pairs. At the same time that this patient of Dr. Warbasse was lying in the hospital, there lay also in an adjoining bed a man who had been operated upon by myself, in which a well-marked tumor in the right inguinal region was present, and upon exposure of the tumor it proved to be the appendix vermiformis enclosed in a wrapper of omentum, a roundish mass which when the omentum was uncovered from it presented a gangrenous appendix surrounded by a certain amount of pus and decomposing débris. These had been prevented from escaping into the general peritoneal cavity by the omental graft that had taken place. It was an exceedingly interesting demonstration of one of the methods by which gangrene of the appendix vermiformis is prevented from becoming fatal.

Dr. Delatour : I can report a similar case, operated upon in September, 1892. There had been a number of previous attacks, two so severe that the patient had been in bed eight weeks with each. The operation was on the third day of the attack. After making the incision through the abdominal wall a tumor was found which consisted of the appendix wrapped up in a mass of omentum. It was with difficulty separated, and in this omental envelope the appendix was found to be sloughing. I succeeded in removing the appendix and the omentum attached to it. The patient made a good recovery and to-day is enjoying perfect health.

Dr. Warbasse : The peculiar feature about the appendix which I presented this evening is that a general infection had occurred before this salutary wrapping about with the omentum had taken place ; and that, although the perforation through which the general peritoneum had become infected was covered at the time of the operation, the infection had already occurred. There was no circumscribed abscess cavity, but simply the general peritonitis with the purulent exudate among the small intestines and deep down into the pelvic cavity.

BROOKLYN PATHOLOGICAL SOCIETY.

The annual business meeting was held January 11, 1894, the President, Joshua M. Van Cott, Jr., in the chaïr.

The minutes of the last annual meeting were read and approved.

Treasurer's Report.—The Treasurer reported total expenditures for year 1893, $139.02, and a balance in the treasury, January 1, 1894, of $67.32.

Members elected during the year, 30 ; reinstated, 1.

Members lost during year by being dropped, 8 ; by resignation, 2, leaving a total membership of 115 ; of these 6 have been suspended for non-payment of dues and will be dropped next year if dues are not paid before that time.

The report was referred to the Auditing Committee.

Secretary's Report.—Average attendance upon meetings, 23; least, 6; greatest, 38.

There were presented during the year eight very instructive and interesting papers:

1. Pathology of Yellow Fever. G. M. Sternberg, M.D., Surgeon-General, U.S.A.
2. A Series of Five Laparotomies. E. A. Day, M.D.
3. Results of Recent Investigations on the Growth and Development of the Comma Bacillus and Methods of Diagnosing Cholera Asiatica. E. H. Wilson, M.D.
4. Are the Parasitic Theories of the Etiology of Carcinoma Tenable? J. P. Warbasse, M.D.
5. Etiology of Cancer. J. M. Van Cott, M.D.
6. Series of three papers on Carcinoma Uteri and its Relation to Adenoma and Fibroma Uteri. Eliza M. Mosher, M.D.
7. Bacilli Coli Communis. Ezra H. Wilson, M.D.
8. Ectopic Pregnancy. E. Palmer, M.D.

The following apparatus presented:

1. For collecting bacteriological material for examination. L. C. Ager, M.D.
2. Modification of same. Dr. Sharpe, of Kansas City.
3. Freeborn's modification of Litten's centrifugal machine. J. M. Van Cott, Jr., M.D.

Besides these there have been presented before the Society seventy-five pathological specimens obtained from surgical operations and autopsies, embracing neoplasms, deformities, lesions caused by disease or injury, anomalous development, calculi, and extra-uterine pregnancies.

The parts of the body affected by the conditions included under the first three headings: brain, skull, eye, bones of ear, œsophagus, stomach, spleen, intestines, liver, pancreas, lung, heart, kidney, bladder, uterus, ovary, fallopian tube, broad ligament, jaw, femur, breast, veins, and abdominal wall, and were presented by Drs. Brinkman, Slee, Creamer, Wilson, Van Cott, Belcher, Maddren, Barber, Knapp, Cruikshank, Kemp, Sheppard, Mosher, Clayland, Polak, Seymour, Warbasse, Owen, and Palmer.

Specimens deserving especial mention on account of their rarity: Two diverticula of intestine, one lithopædion, one twin pregnancy with single placenta, one hour-glass deformity of gall-bladder, one aneurism of anterior flap of mitral valve of heart, renal calculus, a cast of whole pelvis of kidney, one gastric ulcer on *lesser* curvature of stomach and near *pylorus*, one tumor of fœtus causing dystocia.

The papers and specimens were discussed by Drs. Slee, McEvitt, Van Cott, Dudley, Winfield, Mosher, Warbasse, Belcher, Pilcher, Wight, Shoop, Cruikshank, Stuart, Clayland, Minard, Sharpe of Kansas City, Sheppard, Eltinge, and Bristowe.

On motion the Secretary's report was accepted and ordered to be placed on file and published with the proceedings of the Society.

The Committee on Microscopy stated that all it had to report would be an addendum to that given by the Treasurer.

There was intrusted to that committee $20 for the purpose of making negatives and lantern slides illustrative of the papers read before the Society; of this amount only $9.70 had been expended, leaving a balance of $11.30.

The Society is now the possessor of sixty good lantern slides and sixty negatives, the commercial value of which would be not less than $45.

The report was accepted and the balance ordered to be left in the hands of the committee for future work in same line.

The Librarian, who was appointed during the year to act as an assistant to the librarian of the Kings County Library, reported the following condition of the pathological division of that library:

There are fifty works on General Pathology, twenty pamphlets, and seventy bound volumes of Transactions of the Society, microscopical journal, and other works dealing with pathology and histology—all out of date, and the library contains none of the recent works of the most illustrious American and foreign authors.

The Librarian recommended the appropriation of $25 for purchasing such works and journals as the Librarian and members of Society should deem advisable.

The report accepted and recommendation ordered to be considered under head of New Business.

A communication was received from the New York Academy of Medicine stating the action taken by the Academy on the coroner question.

On motion the Secretary was ordered to reply, saying that the Brooklyn Pathological Society heartily endorses the action of the Academy, and that it will co-operate to the full extent of its power and ability to secure the necessary legislation in the matter.

ELECTION OF OFFICERS.

On ballot the following were chosen as officers for the year 1894:

President, Wm. Nathan Belcher; Vice-president, Francis H. Stuart; Secretary, Frederic J. Shoop; Treasurer, J. M. Clayland.

On motion the retiring President was thanked for the excellent manner in which he had conducted the affairs of the Society.

A vote of thanks was also tendered to the Treasurer and to the Secretary for the faithful discharge of their duties.

NEW BUSINESS.

An amendment was offered to add to the regular committees of the Society a *Membership Committee,* whose duty it shall be to present the work of the Society, and advantages to be gained by membership in it, to the profession and to secure new members. Carried.

The $25 asked for by the Librarian was appropriated and given in the hands of a committee of three, including that officer, to be used according to its discretion.

The Secretary asked that the Society, while it was in the appropriating mood, should permit him to hire a stenographer to take down the discussion of papers. Referred to a committee to inquire cost, etc., and report.

The Auditing Committee stated that the Treasurer's report was correct.

The Treasurer moved that the annual dues be $2 for the year 1894. Carried.

Motion to adjourn. Carried.

FREDERIC J. SHOOP, M.D., *Secretary.*

BROOKLYN GYNÆCOLOGICAL SOCIETY.

Meeting of October 6, 1893. The President, Dr. Walter B. Chase, in the chair.

SPECIMENS AND INSTRUMENTS.

Dr. Charles Jewett presented a portion of an ovarian tumor. The patient was a single woman past the menopause, who when first seen by her physician had an enormous abdominal enlargement which had rapidly increased in size within a few days. He aspirated the abdominal cavity and drew off a large quantity of bloody fluid. Dr. J. saw the patient the next day when the abdomen had refilled. It was extremely tense, the patient was suffering from dyspnœa and otherwise from pressure, and evidently about to die. Dr. J. opened the abdomen and found the source of the trouble to be a solid ovarian tumor which had ruptured. The amount of material removed was about enough to fill a quart fruit jar. The tumor was still bleeding, or, rather, its pedicle was. This was tied and the remnant of the growth removed. An ovarian cyst about the size of a large grape fruit was also removed. Throughout the lower half of the abdomen were broken masses of tumor which had become attached to the intestines and uterus by recent adhesions. By the time most of the fragments had been gotten away the woman was apparently moribund. He therefore hastily flooded the peritoneum with a warm normal salt solution and closed the abdomen. The woman, as most patients do who are suffering only from blood loss, rallied promptly when the bleeding was stopped and made a good recovery. The specimen was submitted to the pathologist.

Dr. McNaughton: Was the fluid in the peritoneal cavity mostly blood?

Dr. Jewett: There was blood there, but there was other fluid also, probably ascitic fluid, due to the irritating presence of the tumor, possibly in part ovarian.

Dr. Jewett also presented a new axis traction forceps. His main aim had been to embody the best principles of the Tarnier pattern in a lighter instrument; the Tarnier forceps is too heavy, yet the mechanical principles involved in axis traction are better carried out in this than in most of its imitations. And the Tarnier forceps is a good one, not only for the manner in which the axis traction principle is carried out, but for other reasons. It has the right pelvic curve for all around use, and its cephalic curve is elliptical rather than circular. This, Dr. J. believes, is an advantage, for the reason that an elliptical cranial seizure will hold a small head well, or a large head equally well, whereas a forceps with a very strong cephalic curve does not so readily hold the small head if it is very small, and the grasp is such that the tips of the blades sink into the head and are liable to do damage. The new forceps is constructed according to the mechanical projection worked out by Dr. Milne Murray. The main requisite is this: that the traction force shall be applied in the line of descent and therefore in the axis of the forceps blades. To insure the right line of traction an axis traction forceps should be so built that when in use the direction of the handles will serve as a guide to the line of pulling. When properly constructed, the pull will fall in the axis of the blades so long as the traction rods are kept nearly parallel with the forceps handles. The new instrument is made by Tiemann.

Simpson's forceps, which was shown, are lighter than the Tarnier, but clumsy. After applying the second blade one traction rod has to be lifted over the shanks of the instrument before the forceps can be locked. Again, the cephalic curve in Simpson's instrument is too nearly round.

Dr. Chase: What name do you give this instrument?

Dr. Jewett: None but axis traction forceps. It is convenient to have independent traction rods to fit ordinary forceps. Reynolds, of Boston, I think, is the author of such an apparatus. The rods have hooks at the distal ends by which they can be hooked into the fenestræ of the forceps. This, however, does not secure traction in the best line. It is of advantage over the ordinary instrument, but it does not fulfil all that Tarnier intended. The tractors of the instrument presented can be taken off and the forceps used as an ordinary forceps.

Murray and Nagel deliver by the traction rods till the head is in the world, and Nagel claims no ruptured perineums. It is doubtful whether there is any advantage in the Tarnier instrument, however, after the head is well down on the pelvic floor. Dr. J.'s experience with Nagel's method in one case was a ruptured perineum.

Dr. Chase: Will you please state the relation of the traction handles to the main axis of the instrument.

Dr. Jewett: When the traction rods are held parallel with the shanks or handles of the forceps, the pull upon the traction bar will be in line with the axis of the blades and therefore in the pelvic axis. This accomplishes the delivery with the least possible amount of force. It is a mistake to assume that the object is more power. With this instrument delivery can be done with less pulling and with less pressure on the head than with the common forceps.

Dr. Dickinson presented a number of rubber stamps, each stamp enumerating the symptoms of a single disease, which were of value in facilitating the taking of series of histories and recording the same in the physician's case-book.

NARRATION OF CASES.

Dr. J. W. Hyde: Twelve days ago I performed a supra-vaginal hysterectomy by Baer's method, and the results having been exceptionally favorable, I am induced to report the case. The previous history of the case is somewhat phenomenal, considering what the operation disclosed. The patient had never complained much of pain, yet I found some grave adhesions on the left side, and such a condition of the ovaries as we are led to believe, by all the literature on this subject, cannot exist without a great deal of pain. The left ovary was bound down to the lateral and posterior surface of the uterus by dense and very firm adhesions, by which it was smothered and partially atrophied. When the ovary had been dissected from its bed it was not as large as the kernel of an ordinary sized almond. The right ovary gave evidence also of disease.

The adhesions on the left side referred to involved all the lateral surface, mingling with the ovarian adhesions and leading to the belief that the primary cause of the inflammatory action there had arisen from defects in the ovary and tube of that side. The uterus was crowded up and to the left. All of her previous history of discomfort was in the form of dyspeptic symptoms with occasional attacks of gastralgia. She suffered considerably from menorrhagia, and was becoming more and more anæmic. There were two fibroid tumors of about the size of a new-born child's head, and the uterus itself, about four times its normal size, was made so by the presence of several small interstitial fibroids. The operation was performed in the Trendelenberg posture.

Aside from the nausea, which was more than usually persistent, there has been no untoward symptom whatever in this case. The temperature never went above $99^1/_2$°, except on the third day, when it was $100^3/_8$°, dropping back to $99^3/_4$° the following day, then to $99^1/_2$°, which was maintained until the abdominal stitches were removed yesterday; to-day her temperature is normal. She has had no pains referable to the abdominal wound, external or internal.

The interesting feature of this case is that there should be so much degeneration and so grave a condition of things existing there, and that there was so little pain prior and subsequent to the operation. The operation was performed because of the menorrhagia which necessitated interference. This success demonstrates once more the feasibility and safety of hysterectomy by Baer's method, which method seems to have done away forever with disputes over the intra- and extra-peritoneal treatment of the stump.

Dr. R. L. Dickinson presented as the paper of the evening the history of the following cases :

1. Case of a child weighing at birth 20 pounds or over.
2. Umbilical cord tied about each ankle, tying the feet together.
3. Cord turned four times around the neck of child, with one knot.

Discussed by Drs. Jewett, F. Baldwin, A. J. C. Skene, Chase, L. G. Baldwin, and Maddren.

EXECUTIVE SESSION.

Dr. Skene, on behalf of the Committee on New Building, stated that his Committee had conferred with the General Committee composed of committees from the other societies, and had to report progress.

The Treasurer's report for the year 1892-3 was read, received, and placed on file after having been audited and found correct by Drs. Dickinson and Baldwin, a committee appointed by the Chair for that purpose.

ANNUAL ELECTION.

The following officers were elected for the ensuing year : President, Dr. Charles Jewett ; First Vice-president, Dr. Geo. McNaughton ; Second Vice-president, Dr. A. Ross Matheson ; Recording Secretary, Dr. Wm. H. Skene ; Corresponding Secretary, Dr. R. L. Dickinson ; Treasurer, Dr. Wm. Maddren ; Pathologist, Dr. J. M. Van Cott, Jr.

On motion of Dr. Skene, duly seconded, Dr. Van Cott was elected an Honorary Member of the Society.

Dr. W. B. Chase, the retiring President, in a few appropriate words, thanked the Society for their support and courtesy to him during his term of office.

There being no further business, on motion the meeting adjourned.

WILLIAM H. SKENE,
Secretary.

KINGS COUNTY MEDICAL ASSOCIATION.

At the March meeting Dr. A. C. Brush will read a paper on Neurasthenia, and Dr. H. H. Morton a paper on Raynaud's Disease, with a report of three cases.

CORRESPONDENCE.

BROOKLYN, N. Y., January 20, 1894.

TO THE EDITOR OF THE BROOKLYN MEDICAL JOURNAL: I take the liberty of sending you a brief sketch of the history of the result of tuberculin as a diagnostic agent in an instance in which I was recently interested.

The admirers of high-bred Jersey cattle and scientific dairying will be sorry to learn that Mr. F. W. Hawley, the proprietor of the Pittsford Farms, of Pittsford, N. Y., has recently determined to destroy his entire herd of pedigreed animals, numbering over 160, having satisfied himself that they are tainted with tuberculosis. Mr. Hawley had his stock in the charge of local veterinarians, with instructions to make periodical examinations, report to him the existence of any contagious disease, and to isolate or slaughter any suspected animals. Desiring to be doubly certain of the healthy condition of his cattle, Mr. Hawley some time ago requested the State Board of Health that they examine his herd by the tuberculin test.

Out of the entire herd, 120 cattle having a normal temperature not higher than 102° were tested by an injection of tuberculin, and all but twenty, five of which were cows and the rest yearlings, "reacted," the elevation of temperature ranging from 103° to 107.5°.

The high percentage of cattle reacting in this instance caused the post-mortem examinations to be looked forward to with considerable interest. Seventy-two of the worst were taken to a convenient place and slaughtered and post-mortem examinations made by Dr. Curtis, of the State Board of Health, I being present in the interest of Mr. Hawley. Tubercular lesions were found in all the animals with the exception of two, in which no macroscopical evidence of tuberculosis could be detected. The majority of the animals were affected either in the mediastinal glands or mesenteric glands only a few having pulmonary lesions of any extent, and except in two or possibly three cases the most careful physical examination would have failed to detect the lesions.

The question that naturally presents itself is what course the State Board of Health will pursue with regard to the further testing and destroying of cattle in this State. In justice to the public they cannot allow the matter to rest at this point, the natural inference being that other herds may be as extensively involved, possibly more so. Yours truly,

L. MCLEAN, M.R.C.V.S.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

A SYSTEM OF GENITO-URINARY DISEASES, SYPHILOLOGY, AND DERMATOLOGY. By Various Authors. Edited by Prince A. Morrow, A.M., M.D., Clinical Professor of Genito-Urinary Diseases, formerly Lecturer on Dermatology in the University of the City of New York, Surgeon to Charity Hospital, etc. With illustrations. In three volumes. Vol. II., Syphilology. New York: D. Appleton & Co. 1893.

This valuable work, second in order of the series of Monographic Studies, as stated in the title above, claims more than a passing word of commendation. The book is meant for the Illuminati and earnest students of this branch of medical science, and will, we doubt not, meet with favorable reception by them. It forms a large though not unmanageable bulky volume of 900 pages of text and a little over 25 of indicia, etc.; is generously illustrated, containing about 100 plates and engravings in all, 10 of the first being colored; the subjects well chosen for the most part, and for the most part well executed.

The subjects, considered in order, are:

(1) The History, Geographical Distribution, Evolution, and General Pathological Anatomy of Syphilis.
(2) The Etiology of Syphilis.
(3) Modes of Infection in Syphilis.
(4) Primary Syphilis.
(5) Constitutional Syphilis.
(6) Syphilis of the Skin (Syphiloderma).
(7) Syphilis of the Appendages of the Skin (Hair and Nails).
(8) Syphilis of the Mucous Membrane of the Mouth and Tongue.
(9) Syphilis of the Joints, Muscles, Bursæ, Tendons, and Aponeuroses.
(10) Syphilitic Affections of the Bones (Dactylitis Syphilitica).
(11) Syphilis of the Upper Air-Passages.
(12) Visceral Syphilis.
(13) Syphilitic Affections of the Rectum and Anus.
(14) Syphilis of the Genito-Urinary System.
(15) Syphilis of the Nervous System.
(16) Hereditary Syphilis of the Nervous System.
(17) Syphilis of the Eye and its Appendages.
(18) Diseases of the Eye and its Appendages, due to Inherited Syphilis.
(19) Syphilis of the Ear.
(20) Hereditary Syphilis.
(21) Diagnosis and Prognosis of Syphilis.
(22) The Treatment of Syphilis.
(23) Syphilis in Relation to Public Health.
(24) Chancroid.
(25) Chancroid of Anus and Rectum.

Thus it can be seen how broad the plan has been; the two last monographs, it will be noticed, are on chancroidal manifestations, which, though not exactly allied, have a manifest right to be considered as analogic and germane to the subject.

To give each essay its meed of critical notice would involve taking up more space than could be accorded this review; enough to say, then, that all the authors are entitled to credit for their evident painstaking and research into the literature of the subjects, past and present, and their avoidance of prolixity in general. Sometimes, as in the History of Syphilis, one would like to find a more *ex cathedra* opinion of the writer himself, in this case as to the definite origin of syphilis; it seems truly a *quæstio vexata* to him as to others, but on the whole he appears to us to favor the theory of American origin.*

The editor's own share of the work, that on the Dermic Manifestations of Syphilis, is naturally by far the longest essay, the most profusely and let us say here, the best illustrated part of the volume, the text as good as the illustration.

The articles on Syphilis of the Eye and its tutamina and appendages, etc., and those on Nervous Syphilis, are naturally more recondite in character, and would be best judged by the ophthalmologist and neurologist respectively, but to a relatively superficial reading seem good and clear. One remark, however, by the writer on Syphilis of the Nervous System in the first page strikes us as peculiar to say the least, *sic:* "and lastly, I have been convinced, rather against my former views of the duality of the syphilitic lesion, that syphilis of the nervous system appears not infrequently after soft chancre without the customary secondary eruptions. This is particularly true of tabes and of ocular palsies."

It being impossible, as was said, to mention all critically, at the risk of being deemed invidious we think the articles on Treatment, Visceral Syphilis, Hereditary Syphilis and those on Chancroidal Manifestations among the most interesting. The volume as a whole we consider a valuable addition to the list of those on special subjects by American authors, and we shall look forward to the appearance of the closing (third) number of this series with great interest.

S. SHERWELL.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. For the use of Students and Practitioners. By J. Nevins Hyde, A.M., M.D., Professor of Dermatology and Venereal Diseases in Rush Medical College, Chicago. New (third) edition. In one octavo volume of 802 pages, with 9 plates, of which 3 are colored, and 108 engravings. Philadelphia: Lea Brothers & Co. 1893. Cloth, $5; leather, $6.

The author is to be complimented as well as congratulated at and on the appearance of this the third edition of his really standard work. It has been, as is stated in the preface, greatly enlarged since the first edition and now stands in rank with the several other equally excellent works on dermatology by American authors, and this branch of American medical literature is certainly not excelled by any other, and compares favorably in our opinion with that of any country on this special subject.

Thirty-five new diseases (or what in some cases we should prefer to call sub-varieties) have been added and considered in this volume, the result of the world's activity of research in this special study during the last ten years, with, of course, the result of giving us much more text than in the older editions; other emendations and corrections have been made; and none of this additional matter has seemed to us to be in the nature of padding.

Typography, and illustrations, both original and borrowed, are respectively good and well selected; errors rare. To sum up briefly, we can safely recommend the work to the classes to whom it is addressed—the student and the general practitioner—as a good, safe work.

S. SHERWELL.

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* In this connection we would refer our readers to some recent articles by Dr. F. Buret, France, and Dr. E. L. Morgan, Washington, D. C., in Fournier's Journal des Maladies Cutanées et Syphilitiques for May and August, 1893.

MISCELLANEOUS.

Dr. E. C. Mann has been elected honorary member of the medical section of the Society of Sciences of the Imperial University at Kharkeff, Russia.

The Faculty of Jefferson Medical College have unanimously resolved to institute a compulsory five years' course with the session of 1895-96.

This step was taken in order that the large clinical service of the Jefferson College Hospital (350 cases a day) might be utilized to the fullest extent in carrying out the desire of the Faculty to provide advanced medical education of a practical character.

Dr. Clarence Thwing, formerly of Brooklyn, is the editor of *The Northern Light*, a quarterly journal of missions published at Fort Wrangel, Alaska.

An army medical board will meet in Washington during April to examine candidates for appointment to the medical corps of the army. Application should be made to the Secretary of War before March 15th.

The tenth annual meeting of the Fifth District Branch of the N. Y. State Medical Association will be held in Brooklyn on Tuesday, May 22, 1894. All Fellows desiring to read papers will please notify the Secretary, E. H. Squibb, M.D., Post-office box 760, Brooklyn.

SOME BROOKLYN STATISTICS.

The number of buildings of all kinds was, December 24, 1893, 112,930.

The average daily consumption of water for 1893 was 75,876,741 gallons.

From January 1 to November 30, 1893, 14,651,517 miles of streets were cleaned.

During the same time $163,666.63 were expended for removing 730,739 loads of ashes.

During the same months 3,384,926 cubic feet of garbage were collected and removed.

At the Contagious Diseases Hospital, since it was opened in the fall of 1891, there have been 774 persons with contagious diseases received and treated. Of these 523 were in 1891–2 and 251 during 1893. The diseases were apportioned as follows: Variola, 634; diphtheria, 46; scarlatina, 55; measles, 28; erysipelas, 7; eczema, 3; yellow fever, 1. Besides these nearly 100 persons were received to be quarantined for diagnosis.

The Medical Society of the County of New York proposes legislation to regulate the practice of obstetrics by midwives. A committee of that body has found that there are in the city of New York no less than 3,000 midwives, who report nearly as many births as all the physicians together. The act proposed requires them to obtain a license from the State Board of Medical Examiners.

The Health Department of New York City has done good work in its investigation of diphtheria in that city. During three months they have found 405 cases of true diphtheria. In 245 of these the bacilli disappeared within three days of the complete separation of the false membrane; in 103 cases for seven days; in 34 for twelve days; in 16 for fifteen days; in 4 for three weeks; and in 3 for five weeks. It has been found that the bacilli disappear far more rapidly in cases that have been subjected to frequent irrigation with antiseptic solutions from the beginning of the disease.

These experiments have led the Health Department to adopt the rule that no person who has suffered from diphtheria shall be considered free from contagion until it has been shown by bacteriological examination, made after the disappearance of the membrane from the throat, that the throat secretions no longer contain the diphtheria bacilli, and that until such examinations have shown such absence, the case must remain isolated and under observation. Disinfection of the premises, therefore, will not be performed by the Department until examination has shown the absence of the organisms.

The Columbian Dispensary is the title of a new dispensary at 140 Clermont Avenue, Brooklyn. The medical staff is as follows: George R. Kuhn, M.D., D. E. Callahan, M.D., A. F. Carroll, M.D., P. J. Curren, M.D., D. C. Mangan, M.D., M. Amador, M.D.; assistant physicians: Robert H. Herkimer, M.D., Henry M. Hufnagel, M.D., James F. Gallagher, M.D.

Arrangements have been made whereby all prescriptions may be filled at nominal prices. It is further intended to set aside a part of the house for diet dispensary uses, where such nourishment may be obtained as is required by the sick, without which medicines are of little account, and which nourishment is too often beyond the reach of the poor.

Dr. Richard Slee, formerly of Brooklyn, has entered practice at Swiftwater, Pa.

BROOKLYN VITAL STATISTICS FOR SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER, 1893.

BY J. S. YOUNG, M.D., DEPUTY COMMISSIONER OF HEALTH.

Population estimated December 1, 1893, 999,046. Births reported, September, 1,720; October, 1,735; November, 1,445; December, 1,707. Deaths reported, September, 1,575; October, 1,541; November, 1,350; December, 1,601.

CAUSES OF DEATH.

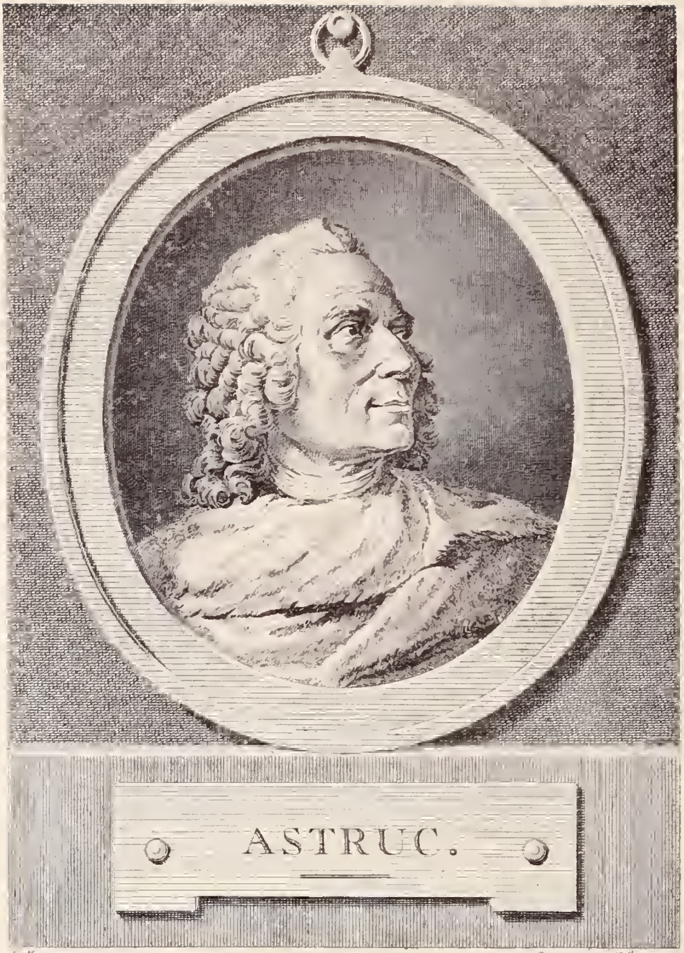
	Sept.	Oct.	Nov.	Dec.		Sept.	Oct.	Nov.	Dec.
Croup	17	38	21	32	Small-pox	0	3	2	0
Scarlet fever	3	10	12	13	Diphtheria	34	62	83	51
Typhoid fever	21	22	25	14	Pneumonia	?	111	157	270
Whooping cough	14	13	7	15	Diarrhœal diseases	227	112	18	13
Measles	3	1	7	12	Cerebro-spinal meningitis	10	10	9	7

REPORTED CASES.

	Sept.	Oct.	Nov.	Dec.		Sept.	Oct.	Nov.	Dec
Scarlet fever	58	92	129	240	Diphtheria	76	173	213	170
Typhoid fever	22	30	27	19	Small-pox	14	34	43	71
Measles	35	32	125	121					

DEATH RATE.

	Sept.	Oct.	Nov.	Dec.		Sept.	Oct.	Nov.	Dec.
Brooklyn	19.34	18.15	16.44	18.87	London	20.30	18.60	19.32	26.08
New York	21.08	19.85	18.34	20.99	Paris	18.80	17.40	18.22	20.40
Philadelphia	19.75	16.22	21.55	18.17	Vienna	20.30	18.03	18.44	21.72



C. Monnet inv. Gravé par Louis Halbou 1771.

WINSLOW.

THE

BROOKLYN MEDICAL JOURNAL

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

A NOTE ON ASEPSIS IN OBSTETRICAL PRACTICE.

BY O. A. GORDON, M.D.

Read before the Brooklyn Gynæcological Society, March 3, 1893.

It may seem to some that the subject of asepsis in obstetrical practice is so thoroughly understood that reference to it again would be superfluous, but when we consider that undoubtedly more than half the number of confinements are conducted with a total disregard of antiseptic rules, and I might add cleanliness, a short note on the subject may be excused.

When obstetricians observe these rules and make the observance of them so general that he who disregards them will be held responsible for puerperal septic fever, perhaps we shall cease to hear of cases such as came under my observation not long since.

I was called to attend a woman suffering from diphtheritic paralysis, and learned that about three weeks previous she had been confined, and after the delivery her attendant announced that he had just come from the worst case of diphtheria he had ever seen; in a few days the infant died of diphtheria, and shortly after an older child died of the same disease; the mother developed it and also died.

While no one can say positively that these three deaths were due to carelessness on the part of the medical attendant, proper precaution on his part would have left no opportunity for censure.

Would any sane man go direct from a case of diphtheria, scarlet fever, or other contagious disease to the lying-in chamber of his wife? I think not. Then why should he not use the same precaution in visiting one of his patients?

I am aware that many intelligent practitioners wholly disregard antiseptic rules, and excuse themselves by saying they have attended a very large number of confinements and never had any serious trouble, forgetting the fact that trouble does come from just such carelessness. A man might as well claim the battlefield was not dangerous ground because he had frequently been there and not been wounded.

I am afraid they fail to recognize the source of contagion when they have puerperal septic fever.

A woman who is in a physiological condition has a right to expect immunity from septic poison in her confinement, and I believe it is the general opinion of medical men that contamination in such a case is due to carelessness on the part of some one of her attendants.

The physician may be ever so careful and yet have his patient exposed to the greatest danger by a careless nurse.

We have but to compare the records of a few years ago with those of the present time to convince any unprejudiced mind that asepsis has done much to lessen puerperal fever, and that many lives are now spared that were formerly sacrificed. These records speak for themselves and admit of only one conclusion, but there is still room for improvement.

There is no doubt in my mind that many cases of endometritis, salpingitis, hydrosalpinx and pyosalpinx, ovaritis, and peri-uterine inflammation owe their origin to the introduction of septic poison through the vagina during confinement.

The following very simple method, for which I do not claim originality, is the one used in my practice, and I find that the intelligent patient fully appreciates everything that is done for her safety.

I instruct the patient to have ready two wash-bowls and a hand-brush for each, a dozen pieces of boiled cheese cloth for wash-cloths, and the following prescription for lubricating the hand :

℞ Hydrarg. bichl.................................. gr. j.
Glycerin.. .... ℥ij.
M.

Also a bottle of bichloride of mercury tablets.

When labor begins have the bowel emptied by an enema and the external genitals thoroughly cleansed with soap and water. Before a digital examination the parts are bathed by the nurse with a 1-2000 bichloride of mercury solution and the hands and arms of the examiner thoroughly scrubbed with soap and hot water, rinsed, and again washed in a 1-2000 bichloride of mercury solution, the finger lubricated with the antiseptic glycerine solution, the hand to be immersed in the bichloride solution before each succeeding examination, which are as few as possible. At the close of the third stage the external genitals are cleansed by the nurse (whose hands have been rendered aseptic) with an antiseptic solution, and a napkin applied, which has been wrung out of a bichloride of mercury solution and dried.

Should catheterization become necessary, the same antiseptic precautions are observed. No douches are used after normal labor. In instrumental cases the instruments are first immersed in boiling water and then in a five per cent. carbolic acid solution. After delivery a hot carbolized douche is administered.

DISCUSSION.

Dr. J. L. Kortright : I wish to commend the paper and thank the Doctor for his very clear and simple technique. I would say that I pursue a somewhat similar course, though it is not always possible to carry it out for the reason that a great many nurses pride themselves on their ability to examine patients and tell whether they are in labor or not, and many of our patients have already been examined before we are called in, and inquiry very often elicits that fact when it is not suspected. I think many cases of septic poisoning occur in that way.

Sometime ago I had occasion to look over the death-rate of cases of septicæmia in Brooklyn. I took a single month, and in the course of studying the results of the midwifery of midwives compared with the results of the midwifery of doctors, I found in June a year ago there were eighteen women died in this city of puerperal diseases, of which six died of causes non-septic, such as uræmic convulsions, rupture of the uterus, etc. Of the twelve cases reported by physicians, I addressed letters and received replies from nearly all of them, and in only two of these cases had a midwife been in attendance at all. The lesson is this: that a great many very dirty women may be very free from pyogenic bacteria, and a great many very clean men may have enough streptococci on their fingers to give a woman septicæmia.

Dr. Chase: Dr. Gordon's admirable paper opens up an extensive topic, and one which is of paramount interest to all practitioners of obstetrics. I presume in the circle of our own Society, that the practice of every individual member is such that it does not often happen that we have occasion to suspect ourselves of carrying poison to our patients, and yet the truth remains as mentioned in the paper, that there is an amount of carelessness which, in view of the well-established facts connected with puerperal septicæmia, is alarming and painful to the last degree. During a discussion which took place at the time of the meeting of the American Gynæcological Society in Brooklyn a year ago, a gentleman, discussing a paper on pelvic surgery, remarked that it made a good deal more difference what the surgeon put into the abdomen than what he took out, and the same rule applies to the practice of obstetrics in this way, that the risk of puerperal septicæmia is vastly more from the poisons introduced into the vagina from the hands of the obstetrician than from any other external cause.

I would make two classes of typical septic troubles, because all cases of fever following confinement are not septic in their nature; but of those which are, it would be proper to make two distinctions—those which arise from within the patient and those which arise from without the patient. I assume that normal labor is a physiological process in every particular, and it is only when it is interfered with from some outside cause that sepsis ensues. But there is an exception—when patients are themselves diseased, in whom the reproductive tract is already infected with pus or connected with other cavities, or forms of malignant disease are in such proximity that sepsis is unavoidable; but when we except these cases, I have no doubt in the vast majority of cases the poison is introduced from without from the hands of the obstetrician.

The history of septicæmia which occurs in the lying-in hospital (in which our President has had a large experience and can speak with authority) would lead us to believe that there are conditions in these hospitals in which the air is so contaminated with germs that it is impossible perhaps, even with the utmost antiseptic and aseptic precautions, to escape the dangers of infection.

There is quite a difference of opinion to-day regarding just the exact measures and to what extent they should be carried for the prevention of puerperal septicæmia, but I am inclined to believe the rules laid down by Dr. Gordon in a normal patient are all that is required. One of the cases he alluded to I think I saw later on.

Regarding the origin of the sepsis I know nothing, but the facts of the case were painful to the highest degree.

I do not know how we are going to reach the great mass of medical practitioners and impress on them the importance of asepsis instead of antisepsis. I suppose it will become more appreciated with the growth of our science, and gradually it will dawn on all practitioners of obstetrics that there is a responsibility which they cannot escape and to which they should be held to strict accountability, unless they take such precautions as will prevent on their part the infection of their patients.

I do believe that there is a better appreciation of the dangers of septicæmia and an absence of it where carefulness is exhibited, and I believe and trust that this paper of Dr. Gordon's, read as it will be widely—and it is not so long and bulky a paper as to tire a man out to read it—will be one more of those influences which finally will bring the medical profession to a point where they will exercise the proper precaution for the prevention of preventable disease.

Dr. Jewett: Certainly it is a lamentable state of things that the general profession do not take more interest in its prevention. It is well known that the results obtained in hospitals show less than one-half of one per cent. of deaths. One of the best institutions in New York has a record of 3,000 consecutive cases of labor, with only one case of sepsis. In the Preston Retreat at Philadelphia there has been no death from sepsis in seven years, and in the Dresden Clinic the showing is nearly as good, yet the death-rate in general private practice continues about the same as in preantiseptic times—about one per cent. And yet, too, in family practice, as a rule, it is much easier to prevent sepsis than in hospitals.

The experience in hospitals is obtained at the cost of a great deal of pains and care for the reasons that Dr. Chase has suggested, for certainly the patients there are exposed to great dangers without these precautions. The dust of a hospital has been proven over and over again to be a dangerous source of infection. When it floats in the air wounds may be infected by it, as may instruments and the obstetrician's hands. It is not, of course, the air itself, but the dust-laden germs in the air, that may carry infection.

A word with regard to the propriety of attending a confinement after exposure to a contagious case. The doctor's hands are frequently brought in contact with materials well known to be possible sources of contagion, and it is a question what we ought to do after such exposures. My belief is that the physician is justified in going directly from an infectious case to a confinement. I have done it myself repeatedly. I have conducted a prolonged labor after such exposure, delivered with forceps, and sutured the perineum. Unwillingness to do this is a confession of lack of faith in antiseptics. If our antiseptic methods are to be relied on, we can be clean within an hour after a poisonous contact. It is true, reliable experiments have shown that the mercurial salts fail to sterilize the hands in a large proportion of cases. By prolonged scrubbing with soap and hot water and the final use of the permanganate method, however, the hands can be made sterile to culture tests. The doctor's clothing, too, must be clean. But this is not all that can be done for the protection of the patient.

It is perfectly possible to conduct a simple labor without actual contact with the birth canal. Internal examinations may be wholly avoided, and in case of being compelled, as you will be, of course, usually, to use some measures to regulate the expulsion of the head, that can be done through the intervention of a towel soaked in one of the mercurial solutions. In this manner you can feel as sure of not infecting the patient as though you had not been within miles of her. The possibility of conducting a simple labor without examining at all per vaginam is a matter of importance. After a little practice it is perfectly possible to learn nearly or quite all that we need to know by examination of the abdomen, and it is not really necessary in ordinary labors to examine internally so frequently as most of us usually do.

No matter what our previous exposure, I think we should be able to promise the obstetric patient in advance that she shall not have childbed fever, provided we can have full control of the conditions.

Dr. Kortright : Don't you think it makes a difference the class of patients we go among?

Dr. Jewett : It certainly does. There are more exposures, of course, in a certain class of cases that are uncleanly. Cleanliness of the parts involved during labor should be looked after by the patient during the last weeks of pregnancy. That sort of uncleanliness exposes her more or less, the surroundings expose her, and the greater difficulty of carrying out complete asepsis exposes her. Even the nurse and the patient herself are possible sources of infection by their own fingers.

My belief is that general infection comes most frequently from the uterine cavity and very seldom from the wounds below. That may seem irrational, because any open wound, it is well known, affords an avenue through which poison may enter. But drainage from the vagina is fairly good ; drainage from the uterus is not so good. The internum is much narrower than the vulva. The cavity of the uterus presents a large wound, is itself one continuous wound, and is very close to the peritoneum. Resorptive activity is greatest in the uterus. There are, therefore, many reasons why a patient is more likely to be infected from septic material in the uterus than in the vagina. So my belief is that the greater proportion of cases of puerperal septicæmia originate in the uterus. Accordingly the patient is in great measure protected by avoiding any kind of manipulation that carries the hand into the uterus. There is danger here even with the hands clean because of the possibility of carrying septic matter from the vagina up into the uterus. Even with normal secretions in the vagina, micro-organisms, which are innocuous in that location, may take on activity if carried on up into the alkaline fluid of the uterus. The normal, acid secretions of the vagina are considered to be inimical to the pathogenic organisms.

Dr. Kortright: Have you not had more difficulty in preventing sepsis after miscarriage than after labor at term?

Dr. Jewett: I should not have said so; I should not have expected *a priori* that it would be so; the great resorptive activity, the development of the lymphatics, and the previous sodden condition of the uterus, if I may use the expression, are greater after labor than after miscarriage. As a matter of fact, my experience has been that cases of septicæmia have been more frequent after labor at term than after abortion. Statistics may bear out the Doctor's views. It is a common practice to pursue the expectant plan of treating abortions, and nothing could be much more dangerous than necrotic material carried in the uterus three or four days. A great majority of women treated in that way, if they do not die, suffer more or less from sepsis and its inflammatory results in the pelvic organs for a time, if not permanently. Again, I suppose criminal abortions, if included, would swell the list of deaths by sepsis.

Dr. Chase: The bacteriological question in its relation to this disease is certainly one of great interest. I would like to ask Dr. Jewett what is his personal experience with the peroxide of hydrogen as far as a personal disinfectant, and its use in utero in septic conditions.

Dr. Jewett: The clinical results with the peroxide have been very satisfactory with me. I used it last winter in a very bad case of septic uterus where there was apparently no chance of recovery. I passed a tube into the uterus and kept up a slow intermittent injection, a teaspoonful at a time, continuing it for an hour. The patient recovered, though only after a tedious sickness.

I think with regard to antiseptics and disinfectants that we make a mistake in pinning our faith to one or the other according to what we consider clinical tests. The only really reliable tests are laboratory tests. The relative value of different disinfectants is a question for the bacteriologist, and I think Sternberg places the peroxide of hydrogen nearly at the head of the list.

Dr. Maddren: My experience has been that there is more septic trouble after abortion than after delivery at full term. As I was detained and did not hear the paper, I do not know what the Doctor's points have been and therefore I cannot discuss them.

Dr. Jewett: There is a difference between cases of abortion where interference has been practised and those in which it has not. The contents of the uterus are more likely to become septic after the finger or an instrument has been carried into the uterine cavity.

Dr. L. G. Langstaff: It might be said in support of the idea of sepsis originating in the uterine cavity (from pre-existing septic material there or in uterine appendages) that the vagina is very often exposed to contamination from filthy surroundings and yet sepsis does not follow. In some tenement-houses everything is filthy. The hands are frequently introduced into the vagina without the use of antiseptics at all, and it must be often contaminated, but is relieved by the liquor amnii or other discharges in an outflow current while the hand is not placed in the uterus ; so that in the case of septicæmia following that condition it would be presumably from the uterine cavity, since the patient so frequently escapes otherwise. There are some cases in which it would seem inevitable that sepsis would follow from vaginal exposure, and yet it does not, the invasion of the uterus being made.

Dr. Jewett : There is more protection at term, owing to irrigation with liquor amnii and the secretions than at earlier stages.

Dr. Kortright : There are two or three reasons for that. Some women can stand a great deal of septic poison without effect, and then also a good deal of that dirt may not have contained any pyogenic bacteria at all.

Dr. Jewett : Whatever the fact may be in regard to the relative frequency of sepsis in abortions and term labors, it is probably more easily prevented in abortions than in term labors.

CHLOROFORM AND ETHER—SOME SUGGESTIONS FOR THEIR SAFER ADMINISTRATION.

BY LEWIS G. LANGSTAFF, M.D.

Read before the Brooklyn Gynæcological Society.

This is a subject, Gentlemen, of common interest to all departments of medical and surgical practice, yet to gynæcology and obstetrics it is probably of the greatest importance, as in the practice of these branches chloroform and ether are probably most frequently used.

The employment of anæsthesia is perhaps the greatest boon the world has ever known. Chloroform and ether are the anæsthetics most widely used and consequently the most important for our consideration.

Though these agents have been so widely and so frequently used, there always have been, and still are, deep-rooted differences of opinion among physicians as to their comparative safety or danger. The occasional death from one or the other is perhaps regarded now as due to the idiosyncrasy of the patient, and since there is no means of ascertaining this peculiarity, these agents are regarded as to some degree "dangerous," especially in the case of chloroform. This feeling of danger prevails among the laity in greater degree, while most surgeons have some apprehension and anxiety for the patient during anæsthesia. This want of confidence in anæsthesia is detrimental to surgery generally, and the rejection or postponement of measures for relief is a natural consequence.

There are those among the profession who for given reasons make a choice of the agent to be employed in particular cases. Others, again, would invariably, if possible, use ether, and denounce chloroform as positively unsafe. Still others who believe chloroform to be safe if carefully given and do not employ ether. There are minor differences regarding ulterior effects. Why do these differences exist still in agents so frequently and universally used? The greatest efforts have been made to reach the proven truths and adjust them. Experiments on the lower animals, the records of hospitals, commissions of inquiry, and individual experience alike fail in terminating this much-vexed controversy. It is a subject at which one may well hesitate in thrusting upon his hearers, since medical literature is pretty well stuffed with it now. But it is still an unsettled topic, and what is of more importance, it involves questions of life and death to our patients. This, then, is the excuse I offer and on which I ask your indulgence.

I will state what I believe to be current opinion on the specific action of these two agents. The risk of chloroform lies in its depressing effect on the heart and death may result from a paralytic effect. Hence it is to be avoided where the heart is weak or embarrassed in any way. It is believed by some that it also depresses the respiration, and the question in fatal cases arises as to whether the action of the heart or respiration ceased first. It is, irrespective of this, more suitable to children and to the parturient, as they both seem to bear it better. Besides, in the former it is more agreeable and in the latter more prompt in effect. There is also the advantage of convenience. Ether is powerfully stimulating to the vascular system and occasions excitement and struggling; it is to be avoided in degenerate arteries of brain or large vessels. It is somewhat irritating to respiratory mucous membrane and perhaps to the kidneys, and is to be avoided in such chest diseases as bronchitis and extreme irritability of mucous membrane, marked emphysema, pulmonary œdema, phthisis, and also in various forms of nephritis. It is disagreeable to the patient and less convenient to administer. On the whole, it is safer than chloroform.

Yet we read an article occasionally which is diametrically opposed to common opinion. For example, to quote from a recent writer. The title of the paper is "Does Organic Disease of the Heart Preclude the Use of Chloroform?"[1] and reports a case in point which leads him to the belief that chloroform prevented, rather than favored, the danger of heart failure which was likely to occur from straining and muscular tension. In the opinion of many, death would almost inevitably occur in some of these cases. There are cases, of course, in which any undue vascular excitement or mechanical embarrassment put upon the heart might cause death from syncope. Such accidents are common occurrences in every-day life.

Surgeon Major Lawrie, of Hyderabad, states that he has given chloroform many thousands of times without a death. Why has he had no accidents, for he made no selection of cases? The reason given, that the natives there bear it better, is not, I think, the correct one. I knew a country physician in large practice, who for thirty-five years had been in the habit of administering chloroform daily for the extraction of teeth, the patients sitting in a straight-backed chair, yet no accident ever happened. The patients in these cases were chloroformed to primary anæsthesia or partial analgesia, precisely the conditions, it is claimed, in which chloroform is especially dangerous, where death may occur from shock from operation (reflex action), too little of the anæsthetic being given.

There are statistics, too, of the use of ether which seem to prove its absolute safety. Then why do we have deaths? New appliances for administration, accessory drugs, and ingenious methods of resuscitation alike fail to give absolute reliance and safety. The most recent and valuable investigation that has lately taken place with regard to chloroform was undertaken by the Hyderabad Chloroform Commission whose prime object was "to save lives." The Commission considered particularly how far death was due to shock from operation or to shock from chloroform; how far the lethal effect was due to affections of the respiration or of the heart. The Commission was composed of some of the ablest members of the profession and especially qualified to investigate the subject. It was decided that chloroform acts more readily on the respiration than on the heart, so that respiration failing first, the heart is not paralyzed by chloroform. The first chloroform commission showed that in dogs the respiration failed first.

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[1] Dr. Ridgway Barker. Read before the Phila. County Med. Soc., April 27, 1892.

The second commission confirmed this and showed a new point, viz., the rapidity with which the heart fails under the combined action of asphyxia and chloroform. Chloroform is a more powerful anæsthetic than ether. Asphyxia with ether is less dangerous than asphyxia with chloroform, the heart beating much longer.

Attempts were made to produce syncope in animals by raising the head, by attempting to stimulate the vagus reflexly, and by direct irritation, but it all tended to show that stoppage of the heart's action through the vagus was not a dangerous condition. An attempt to produce shock by avulsion of the toe-nail and by blows on the abdomen failed.

In the discussion on anæsthetics in the section of Therapeutics of the British Medical Association, Dr. Dudley Buxton says: "Clinical records show that it is not the diseased only, but the healthy, who succumb to anæsthetics. Death occurs more often in the strong and vigorous. Fright can scarcely be considered a cause, as children don't die as frequently as adults. Death in the parturient is comparatively rare. They do not get complete anæsthesia, as only sufficient for true analgesia is needed; the vapor, too, is well diluted. Insufficiency of the heart is brought about by the too rapid inhalation of chloroform in too concentrated a form." Dr. Buxton further states that the experiments of the English Chloroform Commission, the Glasgow Commission, the careful researches of Prof. Wood and Dr. Hart, of Philadelphia, as well as the research of Dr. McWilliams for the British Medical Association, distinctly demonstrate the existence of primary syncope. Heart-failure may occur before general paralysis; the pulse flags, gets jerky, and ceases while the respiration is unimpaired. Chisholm, and Reeves, of Dayton, Ohio, publish several cases of this character. Experienced chloroformists had related cases to him which left him no doubt as to primary heart failure.

I quote Dr. Buxton's words especially, as they express very clearly the opinion which one side of the profession holds concerning chloroform and of the manner in which it usually causes death. It also places in a clear light the exact contrary of opinions on this important subject, and these opposite opinions obtain the world over. In the further discussion of this subject Mr. Pridgin Teale favored ether, and imputed accidents in its administration to improper or insufficient teaching of the art. The more intelligence and practice, the more safe its administration. The administration was an art to be learned and could be acquired by all except those who had not the power of concentrating their attention on what they were doing, and those who were so deficient in sensitiveness as not to know when the patient was failing. As little as possible should be given. It is my firm conviction that though this is seemingly dogmatic, it nevertheless contains the truth.

If this statement may be made concerning ether, with how much more force may it be made concerning an agent so much more powerful? The Hyderabad Commission and Lauder Brunton say that ether and chloroform act alike, but that chloroform is the stronger. There is another point that may be noticed here: while chloroform is so much more powerful it is the more respirable gas, as it is rather pleasant than otherwise and does not irritate the respiratory tract. Patients will inhale it deeply and freely. With ether (the weaker agent) the patient resists, stops breathing, and it is difficult to give a large dose at first. With these conditions and an inexpert anæsthetizer, why wonder at the danger and the frequent accident? The settlement of the question whether anæsthetics, and especially chloroform, ought to be regarded as unsafe—dangerous—will have to be decided on clinical grounds. Physiological experiment has carried the subject as far as it can; practical application must make the final decision.

Chloroform and ether are both powerful poisons, and as anæsthetics they are pushed to their poisonous effect; they are not given by the measured dose; their object is to abolish ordinary sensation and voluntary motion. This is a necessary demand made of them, and to be accomplished by skilled administration. There is one great safeguard which I desire to insist on: it is, *learn how to give as little as possible, and give as little as possible.*

The susceptibility to these agents, as to many drugs, varies in different individuals and the dose is regulated by the effect. It is over-dosing that kills, and this over-dosing occurs in this manner: The anæsthetic (this applies especially to chloroform, the more powerful) may be by free and plentiful evaporation, and rapid inhalation absorbed by the blood in sudden and large quantities, taking the nerve centres by surprise, if I may use the expression, and annihilate their function. The blood is overcharged with the anæsthetic. With chloroform one drachm precipitated suddenly upon the blood might cause death. Sensibility to pain is abolished as a rule slowly; and dangerous results may ensue before the subject is regarded as "under" anæsthesia. It is generally stated in fatal cases that the anæsthetic had just been commenced, and that the patient was not even "under" anæsthesia, when suddenly the heart or respiration ceased. Nearly always, the more nerve irritation the patient receives, the deeper anæsthesia the patient requires to keep him quiet. This ratio varies in the irritation of certain more sensitive parts, as the toes, rectum, and pelvic nerves generally, the larynx and some other parts. While the patient is not subjected to nerve irritation before the operation has commenced, he seems deeply or sufficiently anæsthetized. The moment he is laid hold of—body turned over, sphincters put on the stretch, hot water applied or skin cut—the shock rouses him, and immediately he is plied with large quantities of the anæsthetic, while the procedure of operation is immediately stopped. Right here is the danger. Abolition of pain and reflex action occurring slowly, the prevention of respiration or heart action is annihilated before the former is accomplished.

There are the accidents frequently recorded, as death from shock, due to insufficient anæsthetization, "paralysis from reflex action." So far as my observation and experience goes, precisely the opposite of this opinion is true. The dose is greater than nerve irritation (stimulation) can overcome. Probably the best way to resuscitate a patient is to irritate those nerves which are most sensitive, which convey the strongest impression to the nerve centres and brain, and to irritate (stimulate) them as extensively as possible. Inverting the patient by slinging his legs over the shoulders and jogging about the room (which has been recommended) has probably this effect. I should suggest, among other measures, for this purpose, stretching of the sphincter ani or irritation of the larynx, though I have never found it necessary to do either. Regarding ether, we are instructed to "watch the respiration"—a sufficient safeguard.

Regarding the proper method of giving anæsthetics, I must say this in advance, it is only to be thoroughly acquired by long practice, and involves the closest observation to know just when the patient has had enough, and to be able to keep him at that balance. It becomes, then, almost an intuition. If the anæsthetic is pushed to a profound degree of narcosis, the position of the patient may be likened to a man walking close to the edge of a cliff. He is in danger and may fall over, and it would take but a slight push (a little more chloroform) to land him into eternity. It behooves us to keep him at a secure distance. The flagging powers of the heart or lungs (and they are closely interdependent) will stop like the pendulum of a clock. In a way their momentum is lost. I feel sure, reviewing my own earlier experience with anæsthetics, and by observation of the practice of others, that the anæsthetist is often perplexed to know at times whether the patient has had too much and is in danger, or whether he has had enough. It is a grave dilemma.

I will say little about appliances for administration. Their convenience is perhaps the only point worthy of consideration. The dose they give is to be watched in the patient. Allis' inhaler for ether, and a common towel tucked in one thickness into a shallow cone-shape is what I prefer to use for chloroform. I do not favor accessory drugs, as morphia and other drugs. Drugs usually complicate and render more difficult and unsafe the administration of anæsthetics and may interfere with means of resuscitation. Neither do I believe that the mixture of anæsthetics is advisable or needful. If one agent seemed unsuitable to a particular case from some idiosyncrasy I would use another.

First, then, in anæsthetization, do not depend on any one sign that the patient is sufficiently "under." Do not watch the respiration or pulse alone—*watch everything* (this, of course, excludes the operation) that pertains to the patient's condition under the anæsthetic. Give both ether and chloroform slowly, at first encouraging the patient to breathe freely and assure him that it will not choke him. In the case of ether, on account of the gas being comparatively irrespirable, it is rarely ever inspired as freely as given, the patient holding the breath or otherwise resisting its administration. It is often advisable, especially in nervous patients, to take a few rapid and deep inspirations of air before applying the anæsthetic. The quantity of choloform applied at a time may be ten or fifteen minims; of ether, it will not matter how much, except that at first it should not exclude the air entirely, thus avoiding the patient's resistance. Occasionally, in the case of chloroform, the patient will at the first stage commence to breathe very rapidly and deeply. The anæsthetist should be aware that the patient may thus take a very large dose rather suddenly unless caution is used. Perfect relaxation of the limbs is an indication that the patient is ready for operation. Stertorous breathing and insensible conjunctivæ may occur before this, although quite commonly neither are shown during a whole operation. If all the signs of anæsthesia are present,—the three above named with pain and reflex action generally abolished,—the patient is probably too deeply narcotized. Frequently the most obstinate obstacle is rigidity of the limbs. The steady application of the anæsthetic and time will overcome this. When the operation is under way I am usually guided by the *tout ensemble* of these signs to keep the patient in an even condition. But there is one almost, if not quite, infallible sign of the degree of anæsthetization. It is the sensibility or absence of sensibility of the larynx. This is especially true of ether and to a less degree with choloform. If the subject of anæsthesia is not too deeply "under," the larynx will be found sensitive to the gas. By allowing him to take a draught or two of air and then applying a strong draught of the anæsthetic he will promptly check the inspiration, cough, or groan, showing the reflex excitability of the larynx. This will occur after every other sensibility is abolished. No response will be had when the patient is very deeply narcotized. The patient's head should be placed on the side, extended and almost or quite flat on the table. Vomiting or retching should be prevented. It is usually threatened by a stoppage of respiration and slight heaving of the abdomen, and is caused by insufficint anæsthesia and indicates that the patient is "coming out." It is checked by the prompt application of more of the anæsthetic. It should rarely happen, though the inexperienced may not quickly recognize its imminence. Laryngeal obstruction from spasm of the larynx or from falling down of the epiglottis (the latter probably due to sliding back of the tongue) may be confounded and prove a source of danger. In the former there is too little and in the latter too much of the anæsthetic. The recognition of the difference depends, in the case of spasmodic obstruction, on general evidence of light narcosis and on the strident quality of the sound. Epiglottic obstruction is rattling and stertorous, like the flapping of the soft palate, with which it may be combined. These conditions are usually relieved by pushing the jaw forward and downward and by giving more or less of the anæsthetic as required. Coughing is excited by the concentration and pungency of the gas, the sensibility of the larynx not being sufficiently blunted. The careful application in greater dilution will overcome it, and the patient should then be kept a little more deeply narcotized. As the time of administering and the operation proceed, less and less will probably be required. When greater irritation of nerves is made, as when plexuses are pulled upon, the anæsthetist should be ready to increase the anæsthesia, forestalling the patient's movements by so doing. The pupils may be dilated or not, dilated usually in deep narcotization; I do not attach much importance to the sign as compared with others. The patient should be anæsthetized in a quiet room and be free from disturbance of any kind, whether of talking or handling him, and especially should the commencement of the operation be withheld till he is completely anæsthetized.

I think a comparison may be made between opium narcotization and narcotization from chloroform or ether which will tend to verify some of my conclusions. In opium poisoning the chief means of treatment is stimulation, not only internal, but external as well and not less important, as flagellation, etc. The respiratory sense is threatened and the reflex action is thus kept up. Similar treatment is required in chloroform poison, but with due regard to weakened heart. Patients can bear opiates very much in proportion to the degree of pain they suffer. As in peritonitis, inflammatory irritation of the nerve endings keeps up a constant stimulation, and doses which might be poisonous in health are given with impunity. A death from the use of chloroform in obstetrics, it is said, has never been recorded (?). In these cases in which this agent is usually only given to a state of analgesia, the recurrence of the "pains" rouses the patient and no doubt acts as a safeguard. I remember anæsthetizing a patient in a country practice for the extraction of a tooth. The patient was a girl of thirteen years of age, in good physical condition; the chloroform was given for "primary" anæsthesia, with the patient in a sitting position. She suddenly grew pale and limp and stopped breathing. I tilted the chair back and caught hold of the tooth with the forceps, when the severity of the pain elicited a groan from the patient, with, of course, the renewal of respiration. I had not been holding the pulse and so do not know if the heart had ceased beating, but it seemed so from her pallor.

I will now conclude this paper by a short recapitulation of the salient points.

The danger of anæsthetics lies almost entirely in overdosage—too much in the system at one time—and may occur at any stage of anæsthetization, even before common sensation and reflex excitability are overcome. This overdosing may be made by the inexperienced, and also, I believe, by the experienced who do not follow the method I have pointed out, believing that there is danger in giving too little. To be absolutely safe requires practice in the above method. The various appliances, drugs, and devices are needless and probably harmful.

The tenacity with which some parts retain their sensibility and reflex action is remarkable, and this is especially marked in some subjects, and to subdue which requires much more of the anæsthetic than is ordinarily required. More than usual care is required in these cases. Perhaps the judicious use of cocaine or morphia in these could be used advantageously. I find much of what I have said confirmed by others whose practical experience in anæsthetics is large.

The administration of anæsthetics should be taught in a practical way to those who would undertake its frequent use. To state that a fatal accident may occur in the hands of experienced men tends to discourage the belief that any special skill can be acquired.

DISCUSSION.

Dr. Jewett: The questions discussed in the paper, though hackneyed, as the author intimates, are certainly profitable ones. No questions, so long as they are so unsettled as most of these are, can cease to be of interest.

In regard to the relative safety of chloroform and ether, I am disposed to think that chloroform has suffered unduly in discussions on the subject. There is no question but that chloroform is more dangerous than ether with all the care that can be used, yet I think a large proportion of the deaths that occur during chloroform administration are preventable. No doubt it is a far safer thing to give ether carelessly than to give chloroform carelessly. Carefully given the difference is not so striking.

We are told by the Hyderabad Commission that chloroform deaths are primarily by the respiration. Wood and Hare have established the fact that the patient may die by the heart. They found that if the drug was given slowly and gradually not in concentrated form the patient may die by the respiration of it if it is pushed far enough, but if given in concentrated form rapidly and freely then the subject may die by the heart. I think it is easier to prevent death by the respiration than by the heart. At all events, if the drug is given with careful observation of the respiration as well as the pulse, I believe the number of chloroform deaths will be diminished.

In regard to the method of administration. It is very common to put a handkerchief in a tumbler and pour chloroform over it and then place the tumbler over the patient's mouth. This I believe is dangerous because of the likelihood that the patient may get a concentrated dose.

The method which I have used is very similar to that which the author has advocated. I place a towel over the patient's face and then lift the middle portion of the towel high enough to make a large air chamber and drop the chloroform drop by drop on the towel.

A frequent source of danger is the impurity of the drug. Some recent observations have shown that if chloroform be purified, and then experiments be made both with the pure article and the residue, that the blood pressure will be lower and the rapidity of the heart, and also the danger to the respiration, will be greater with the residue than with the purified article. A great deal of confidence is always placed in the fact that we have Squibb's chloroform, but even this is not safe unless it has been well taken care of. He has published somewhere the statement that chloroform is liable to deteriorate if exposed to the light. If kept in a dark place, or so kept that it is not exposed to light, it will keep indefinitely. He stated that he has samples of chloroform in his laboratory which have kept for years unchanged, but on the other hand if it is exposed to the light it acquires certain properties which render it dangerous. As to exposure to the air, he says, if the bottle is left open it may not suffer from the contact with the air, but if it is poured from one vessel to another there will be a material deterioration.

A question which has suggested itself to me is the possible effect of giving chloroform in a room in which there is a light burning—a gas flame. We have all had experience with the product of combustion of chloroform vapors. A substance—phosgene-gas—is produced which is very irritating, which will cause cough, and which, it seems to me, may be an element of danger.

Another source of danger is prolonged inhalation, which undoubtedly greatly increases the risks. It has been established that long-continued inhalation of chloroform affects dangerously the heart, kidneys, liver, stomach, and even the skeleton muscles by fatty degeneration. We have clinical evidence enough, I think, that prolonged inhalation is injurious.

As to the treatment which was touched upon, we have some interesting information from Wood and Hare. First, they condemn the ordinary treatment with nitrite of amyl or atropine as almost entirely useless. Alcohol, they claim, increases the danger. Ammonia is of some use. According to these authorities digitalis and strychnia are the most useful drugs for the purpose. I have found them of service in some cases of threatening death from chloroform. I saw a case of difficult delivery yesterday in which the patient had taken chloroform for a long time and improperly given. How far the accident was due to the chloroform I would not say, but the patient developed symptoms of œdema of the lungs, frothing at the mouth. I did there as I have frequently done in similar conditions—I filled my syringe with the fluid extract of digitalis and she did not get less than ten minims under the skin. The symptoms cleared up and the patient has done well since. Wood and Hare endorse the treatment of artificial respiration as the most efficacious of all.

Another method of treatment has been proposed, with which, however, I have had no experience, and that is rapidly alternating pressure over the heart at the rate of 120 times per minute. This is said to be a valuable method of overcoming chloroform syncope. Nitro-glycerine has been spoken of. That is a drug the action of which in chloroform poisoning I have been somewhat at loss to understand. Theoretically I should suppose that it would be most useful in increased vascular tension. It acts more by unloading the work of the heart than by increasing the energy of the heart's action, and that would perhaps point to an indication for its use in specific cases. I think the most profitable information to be had on this subject should come from the physiologists, as it is largely a physiological question. There are many perplexing physiological problems connected with the subject which I would be glad to hear discussed.

Dr. Byrne: My experience may be said to be limited entirely to the use of ether. I am in the habit of giving chloroform to produce partial narcosis and then to follow with the ether, which is kept up the balance of the time required for the operation.

I have little to say about the matter which would be sufficiently interesting to detain the Society, because what I might have said has been anticipated by Dr. Jewett. I was struck two years ago in Paris with the freedom with which they administered chloroform in their operations in hospitals there. I was assured by two of the leading operators in Paris that death had never occurred from chloroform in their practice. The only precaution they take is, as soon as full narcosis is produced, to seize the tongue with a special volsellum made for the purpose. This instrument is allowed to drop to one side of the face and by its own weight secures the tongue protruded during the entire operation. They told me they had never had any difficulty from the use of chloroform.

I have no doubt not only chloroform but ether requires, as the author has said, great care in its administration. You cannot force narcosis by chloroform as is done by ether. It must be very slowly and carefully given, the patient constantly watched and the assistant entrusted with the administration of either drug should not be permitted to have his attention called to anything else but what he is doing.

I have no experience in the administration of either chloroform or ether in the erect position, nor have I ever seen either administered in that way until to-day. I saw a patient put under chloroform to-day while sitting in an ordinary chair and I was astonished to see it. I did not wait to see the result, but I should dread very much to administer chloroform to any patient in that position. I have never lost a patient in thirty years working with ether.

Dr. Raymond: I may state in connection with this subject that at the recent meeting of the American Gynæcological Society, Dr. Reeve, of Dayton, who has, as you doubtless know, given as much attention to the subject of anæsthesia as any one in this country, told me that he had abandoned the use of all anæsthetics except the A. C. E. mixture, which was giving perfect satisfaction, and he had no desire to use chloroform or ether alone.

I would like to ask whether any Fellow has given any attention to the method of forced respiration in narcosis from either chloroform, ether, or morphia, recommended and put into execution by Dr. Fell, of Buffalo. The cases which he has reported are now quite numerous, are exceedingly striking, and, indeed, sometimes in reading his cases and his comments on them I have felt that the profession of Brooklyn was perhaps remiss in not having ready for use his apparatus and some one qualified to use it. In his report of twenty cases he gives evidence showing, so far as any evidence can show, that these patients were moribund, and that were it not for the method which he employed in these cases, death would inevitably have resulted. Every one of these twenty cases seems to me like a complete restoration and revivification, an actual restoration to life.

Dr. McNaughton: What is the method?

Dr. Raymond : There are two methods. One is what he calls the face mask, and the other is by means of a tracheotomy tube. Dr. Fell's attention was directed to the subject by the success which he had while lecturing on physiology in restoring by means of the bellows dogs that had become narcotized during vivisection. It is practically a method of forced respiration by means of a pair of bellows, and valves so delicately arranged as not to injure the lung tissue. In some cases for twelve hours, and in one case for twenty-four hours, he kept up the respiration until the narcotic was eliminated from the body by the natural processes.

Dr. Jewett : A ready method of artificial respiration is direct insufflation, such as is practised in still-born infants. I do not see why that would not accomplish as much as the apparatus in question.

In regard to the A. C. E. mixture, an eminent surgeon of this city in a recent paper condemned it as entirely unscientific and absurd. It seems to me, *a priori*, on the contrary, quite rational. Experience has demonstrated that it is a comparatively safe anæsthetic, and it is strongly endorsed by so good an authority as Dr. J. C. Reeve. In my own experience it has seemed to partake more of the dangers of chloroform than of ether, and sometimes I have been obliged to lay it aside and substitute ether

Dr. Raymond: Many of these cases require the application of forced respiration for hours at a time, and it would be impossible to do that by insufflation. In the A. C. E. mixture Dr. Reeve thinks there is a new compound formed. In regard to the question of deterioration he said he simply made the mixture and filled his bottle and used it. The question of time or change in composition he paid no attention to.

Dr. L. G. Baldwin : I should like to call attention to the administration of atropia and morphia prior to the administration of ether. It first came to my notice through Dr. J. D. Rushmore. It has been his custom for some time past, in all cases of the administration of ether, to have the patients receive from five to seven minims of Magendie's solution and $\frac{1}{120}$ to $\frac{1}{150}$ of a grain of the sulphate of atropia, either hypodermically or by the stomach. When given by the stomach I think he usually substitutes 10 minims of the compound solution of opium instead of the Magendie's, and it has a very pleasant and decided effect. The patients not only take the ether better, but the respirations during it are dryer, and in many cases there is an entire absence of the mucus in the throat, which is often so troublesome. It takes a smaller amount of ether to produce perfect anæsthesia, vomiting is less, and there is less depression afterward. It is quite the exception for patients who are non-alcoholic to vomit after administration of ether by that method.

In regard to the administration of ether, I am sure that the one idea that clings to me most from my teaching in the medical school is that ether should be given concentrated and chloroform diluted. I think that ether should be given diluted almost as much as chloroform at the beginning of its administration, not on account of its safety, but on account of the comfort of the patient. It requires less ether and the patient is more quickly brought under its influence. In laparotomy cases I have repeatedly used less than a one-hundred-gramme can of Squibb's ether, and for the ordinary cervix or perineum operations it is as a rule more than enough. It is administered drop at a time with an Allis inhaler. If it is put on in this way and the patient breathes carefully the first time, and it is then increased, there is no necessity at any time to push it to its highest point. By this method very few patients struggle or have to be held on the table or anything of that kind, and this is far superior to the system which is in vogue in the hospitals of saturating an Allis inhaler until it runs out and then applying it with the aid of half a dozen assistants.

Dr. Raymond: I am glad to hear Dr. Baldwin make that statement because that has been my experience, that the stage of excitement, which is always spoken of as an inseparable part of etherization, does not apply to ether anæsthesia at all; that it is the exception to have a stage of excitement where the ether is administered in the way he mentions; commencing with air until the patient becomes accustomed to the apparatus and then gradually accustoming the air-passages to the ether, she passes off into complete unconsciousness without moving even a finger.

Another point which I would call attention to is the paucity of statistics in reference to the quantity and time. I think those who administer ether and who take no account of the time have really a very inadequate appreciation of the amount of time that is used in putting a patient under ether. It seems to them they have consumed about five minutes, whereas if they had looked at the watch it would more often be found to be fifteen minutes. Until we have series of statistics in which the amount of ether is stated and the length of time of the operation, we have no proper statistics on which to base any comparison of methods.

My experience is very similar to that of Dr. Baldwin—one-quarter-pound can of Squibb's ether, which means six fluid ounces, for each hour of operation, including the bringing the patient under.

Dr. Chase: It is a known fact that the administration of ether in a healthy person has produced fatal results.

Dr. Jewett: No doubt it is possible. It is a poison quite capable of causing death in the healthiest subject. Its power for harm in such cases is only a question of dosage.

Dr. Maddren : I suspect that in certain cases where there is obscure disease of the nervous system, and in certain other cases where true fatty degeneration of the heart exists (and it is sometimes very difficult or impossible to determine that those conditions are present), if these patients are given an anæsthetic, chloroform in particular, one will occasionally succumb. I have seen a death from chloroform which was not due to its careless administration. On the contrary, it was given with much care, but there was present true fatty degeneration of the muscular tissue of the heart; the autopsy revealed that condition. I know of a case that occurred recently where a greater amount of disease was found post-mortem than the surgeon, an eminent gentleman in New York, had suspected. That patient died from ether narcosis, and yet they were very careful, and the administrator was an exceedingly competent man of large experience. So I do not think it is fair to put all cases of death from ether and chloroform down to faulty administration.

Dr. Chase: I raise the question in reference to the view which I believe is quite universal, at least in this country, that deaths from anæsthetics almost always happen from the administration of chloroform and not of ether. In my individual experience I have had very little to do with chloroform, except in obstetric practice. In the absence of well-marked organic lesions of the nervous system, heart, or kidneys, ether is almost absolutely safe. I am thoroughly satisfied that an agent which is so potent as ether, or chloroform, or both of them in combination, should be given with a great deal of circumspection ; that the administration of chloroform should be slow ; that the beginning of the administration of ether should be slow until the solicitude of the patient is quieted and there is no spasm of the glottis ; but when that has been accomplished I am quite certain there is safety and advantage in crowding the ether. If you use the Allis inhaler, and teach your patient at the beginning of the administration of ether to breathe rapidly and take comparatively full inspirations, and you give the ether sufficiently slow, so that the patient is not frightened, and there is no spasm of the glottis, in considerably less than five minutes the patient will usually be anæsthetized without the stage of excitement. But I am not quite clear that any method of administration of ether will in all cases be successful without the stage of excitement. I have seen Dr. Skene's apparatus used only a few times, but I have been impressed with the fact that the patient taking the ether by his method has been wonderfully free from any struggling, with a degree of nervous quietude and absence of resistance not found in the ordinary administration of ether. I think that in surgical operations the assistant who is most skilled should be entrusted with the administration of the anæsthetic.

Regarding the case which Dr. Langstaff has referred to, reported by Dr. Reeve—a man suffering from strangulated hernia. In that case a large dose of morphia was given, and before the administration of the anæsthetic the pulse was only forty-eight, whereas, it would have been better to have given that man atropine. With a heart that is flagging in that way, it would have been well on physiological grounds to have administered atropine to paralyze in a degree the inhibitory nerve of the heart and thereby prevent heart failure. I do not doubt the value of digitalis and strychnia if the condition of the patients indicate their administration, but they act in a different way. None of these special cardiac stimulants should be administered except with clear and well-defined indications based upon their physiological and therapeutical effect.

In my experience I have not seen any serious trouble with the administration of ether in a large number of cases, but that it does prove fatal, and that chloroform does prove fatal independent of faulty administration from the pathological condition of the patient is established. I make it a rule to be quite certain that the patient to whom I am going to give an anæsthetic has, as far as is known, no renal or any apparently serious cardiac disease.

Dr. Jewett: With regard to the use of morphia, I think Dr. Reeve makes it a practice to give morphia in every case before administering the anæsthetic It seems to me the integrity of the muscular structures of the heart is more important than the valvular. I think Pozzi makes the statement that a patient who has to undergo operation with existing valvular disease is safer with than without the anæsthetic, safer from the reflexes.

Dr. L. G. Langstaff: I wish to thank the Society for the courteous reception and interesting discussion which they have given my paper. I have very little more to say on the subject.

The question as to the advisability of giving morphine or other drugs, preliminary to using an anæsthetic, has been objected to on the ground that it interferes with the means of resuscitation provided your patient should get into a dangerous condition. Of course, the effects of the morphia would last much longer than the effects of the anæsthetic, and the former could not be counteracted by any further drugs used to resuscitate the patient.

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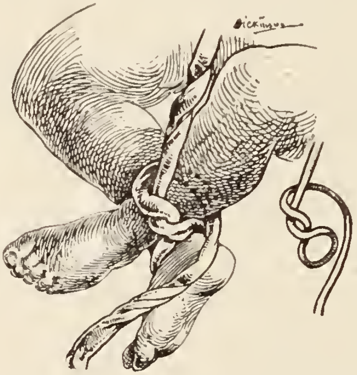
UMBILICAL CORD TIED ABOUT EACH ANKLE, TYING THE FEET TOGETHER. A CHILD WEIGHING OVER TWENTY POUNDS.

BY R. L. DICKINSON, M.D.

Reported to the Brooklyn Gynæcological Society, October 6, 1893.

A healthy, neurotic primipara of twenty-eight, with the average amount of amniotic fluid, with no more than the average fœtal activity during pregnancy, and with a pelvis moderately contracted, suffered twenty-three hours of mild pains and four of vigorous cramp without dilating the external os. Exhaustion, with a maternal pulse-rate reaching that of the fœtus, and obscuring any indication of its condition, necessitated manual dilatation and forceps extraction. The head came comfortably through the pelvic cavity and bony outlet, but an inelastic, œdematous pelvic floor bulged over it. Slow extraction and free lateral incisions saved the perineal body, excepting the external half of the external sphincter, which gave way—as is usual with sphincter tears, I believe (the belief being based on eight cases)—distinctly to one side of the median line.

The well-developed seven-pound child was still-born. The cord was found to cross one ankle, pass around the other ankle, and return to complete its turn around the first, being held snugly



in place by a twist of the two strands between the ankles. Semi-extension of the legs was permitted, the feet and legs were well developed, and there seemed no undue tension on the cord. It was twelve or fourteen inches long (not measured), was rather slender, and showed clots in its vessels.

CORD FOUR TIMES AROUND THE NECK WITH ONE KNOT.

A primipara with no undue amount of amniotic fluid, and with vigorous fœtal movements, was delivered at the seventh month after a labor of seventeen hours, and a second stage of about three hours, terminated by forceps easily applied at the outlet, and with gentle traction. The cord made four complete turns, snugly applied, about the neck and was knotted close to the turns, but had plenty of slack—not measured. The child was well proportioned, but responded rather tardily to attempts at resuscitation. Convulsions developed in four hours and death occurred in sixteen hours from a moderate meningeal hæmorrhage, as shown by the autopsy.

CHILD WEIGHING TWENTY POUNDS AT BIRTH.

Mrs. E. McN., thirty-six, IIIpara, was delivered the first time with forceps by Dr. Welte or Dr. Waugh. She is a very stout, large woman. Her pelvic measurements were not taken, but they were estimated as not above the normal. I was called in consultation after repeated attempts had been made to deliver by traction on the foot presenting. The woman was almost exhausted after a thirty-six-hour labor. With great difficulty the second leg was brought down and the child's pelvis by powerful traction came to the vulva. Then the abdominal and thoracic cavities were eviscerated, and with renewed labor, but with little expenditure of time, the body and arms were withdrawn. Craniotomy was done on the aftercoming head.

Without brain, lungs, heart, liver, or other viscera, and without its blood, this fœtus weighed sixteen pounds, and measured twenty-five inches in length, allowing for some stretching during delivery.

She said her first child weighed nine pounds, her second twenty pounds, and this was her third and last effort, which cost her her life within a short time of delivery.

Incidentally one might say that the history of these large children is of some interest. The largest child on record, weighing twenty-five pounds, is the case of Ortega, a still-birth, the details not given with elaboration. The next largest case, I believe, is that of Anna Swan, the giantess, seven feet eight inches high, married to a man seven feet six inches. Her first child weighed eighteen pounds, still-born ; the second twenty-three pounds, and there were nine quarts of amniotic fluid. In this case it is roughly estimated that the weight of the child, the weight of the liquor amnii, and the presumptive weight of the placenta rendered her fifty pounds lighter when through with the labor than when she began. We frequently hear of sixteen and eighteen pound children, but they must be relatively rare, because in maternities we see so little of them. The last 3,600 cases in the Rotunda Hospital at Dublin show only one child reaching eleven pounds. In our own clinic it is years since we attained a higher point than ten and one-half pounds, and there are other long series of cases with none beyond twelve or thirteen pounds ; but this is a case which is certainly correct. The weight was taken with a scale that is guaranteed to be accurate, one that I carry myself and test from time to time, and I have two witnesses.

DISCUSSION.

Dr. Jewett: The case is one of very great interest as a well-authenticated one of excessive development of the child in utero. These cases are common enough, if we accept all the reports we hear, up to sixteen pounds, and yet I think most of these observations are entirely erroneous. Dr. Dickinson will perhaps be able to correct his recollection of the facts at the Long Island College Hospital, which I think are these: In the last ten years the largest child was eleven and three-quarter pounds, most of the large births a great deal smaller than that.

I would like to ask in regard to the first case the Doctor reported, whether the child was alive at the time of his interference, and what sort of giants the parents were in the second case.

Dr. Dickinson: No, sir.

Dr. Jewett: Then it was never a case for symphysiotomy?

Dr. Jewett: Were the father and mother beyond the ordinary stature?

Dr. Dickinson: The father was about five feet ten inches, and the mother impressed me as a large-boned woman, very stout. From the time I became acquainted with modern symphysiotomy I have always regretted I had not known of its success, in order to use it in that case, which would undoubtedly have saved a great deal of the shock necessitated in dragging so large a child through the pelvis, and the operation would have been warranted even with a dead child, to diminish the amount of shock the mother had to suffer. She was in a prostrated condition when I first saw her, and although we spent some time stimulating her with hypodermic injections, and she rallied somewhat, still the lessened shock would have been of value to her heart.

Dr. Jewett: The Doctor's statement in regard to the parents makes the case more remarkable. The proposition to deliver by embryotomy with the aid of symphysiotomy is a legitimate one. It is far more rational than the proposition which has been endorsed by certain authorities, to combine premature labor with symphysiotomy.

Dr. F. Baldwin: Dr. Chase, what was the size of the child you delivered two years ago in Bedford Avenue?

Dr. Chase: I cannot recollect. I remember, however, years ago attending a small German woman who was delivered of a child that weighed between fifteen and sixteen pounds. Her labor was prompt and easy, and would have been completed before I reached her but for the fact that the membranes had not ruptured. I ruptured them and the delivery was completed in a few minutes. As I remember the case the weight of the baby by the steelyards was between fifteen and sixteen pounds. She had a capacious pelvis for a woman of her size. It was the largest baby I ever saw.

The President: You must have had some experience with babies, Dr. Skene?

Dr. Skene: That is true, Mr. President, I have had experience, and yet when I have to discuss any question in obstetrics I can only do so by looking backward, not so far back as Bellamy looked, but it is quite some time since I have had any experience. I remember, however, the two largest children I have ever seen, one a girl of eleven pounds, and I am sure the measurement and weight were accurately taken in the presence of Drs. Mitchell and Conkling—a breech presentation. The mother was quite a large woman, and the husband a man above the average so far as height is concerned. The largest child I ever saw was thirteen and three-quarter pounds; the mother was above the average size, but remarkably well formed, with large pelvis; labor ordinary. I remember the fact, too, that the head of the child was a large one, even large in proportion to the size of the body. I remember another fact, that the lady was a near relative of General Benjamin Butler, which may have accounted for the child's big head. I have seen three children born at once, and I think the three together would probably have weighed eighteen to twenty pounds; but as the product of this gestation came in sections, that would not count in the list of big babies.

In reference to the twisting or tying of the cord around the neck, I have seen it twisted around the leg, but never saw the legs tied together as in this case; but I have seen quite a number where the cord has been very tightly, and several times, twisted around the neck, and I remember two cases distinctly where I was unable to follow the directions given, that is to pull the cord down over the head and so liberate the neck. I was unable to do this in the second case I have in mind. The cord was twined around the neck so tight that I could not move it over the shoulder or neck, and I put compression forceps on each section of it and divided it, leaving one forceps to come away with the fœtal portion of the cord and the other with the placenta afterwards. I do not know whether that is recognized or whether it has been practised by others, but it was the only thing I could do in either of these cases. In the first one, in my hurry I divided the cord first, and then after a little time the bleeding was so profuse that I searched for the ends and compressed them, and that led me to use two compression forceps before dividing the cord.

The President: Did either of those children survive where the cord was about the neck?

Dr. Skene: Both were delivered alive. I tried at once, when I discovered the condition, to relieve it in the usual way and failed to do so. I remember the first case, the head being delivered, of course; it was blue enough to frighten me, and I got the scissors and divided the cord and that child was born alive. There was some difficulty in restoring respiration, but it lived; there was no trouble with the other one.

The President: Dr. Frank Baldwin, will you tell us what is your experience regarding the removing of the cord about the neck.

Dr. L. G. Baldwin: I remember two cases of large children, one authentic and the other perhaps questionable. The first was the child of a woman in Berkeley Place. The first morning after birth the child weighed sixteen and a half pounds on reliable scales. The mother weighed nearly 200 pounds and was well proportioned. This was her seventh or eighth child.

The child was born after a labor of less than half an hour without any artificial aid.

The other case was in Dr. Thomas' service at the Woman's Hospital, and the facts are partially from the patient herself. She had had three previous miscarriages, and the last one, I think, was seventeen months before this child. She said it weighed twenty-three pounds. She was a very large woman, and from the condition of the soft parts of the pelvis I think it might have weighed that much. There was no vesico-vaginal fistula, but there were extensive lacerations of the anterior wall, the cervix was all gone, perineum completely lacerated, including an inch of the rectal wall. She was delivered by Dr. Bishop, of Ninth Street.

Dr. William Maddren: Perhaps large babies should not be expected in hospital practice. I had one experience with a large baby and the circumstances were exceptional. The father and mother were hardy Scotch people, not over the average size. The mother was in her forty-sixth year and it was her eleventh child. The baby was the largest I ever saw. I weighed it myself, and it weighed fourteen and three-quarter pounds without a thread of any kind upon it.

Her pelvis was roomy, and she was not specially lacerated at the time. Although the labor was difficult—the most severe she had had—I did not have to use the forceps.

A POSTURE MODEL.

BY ELIZA M. MOSHER, M.D.

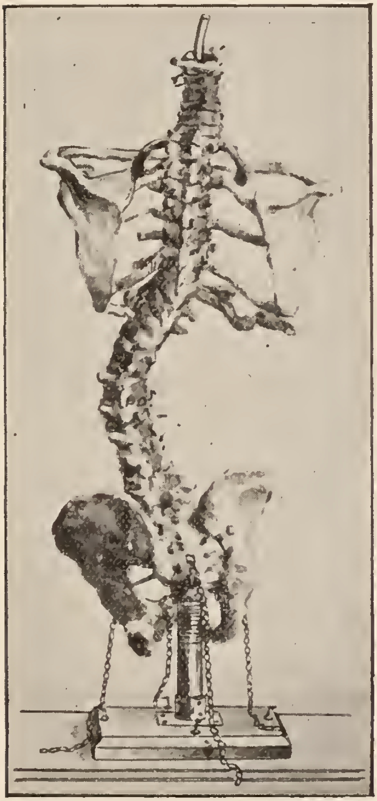
The inflexibility of the dry skeleton has always limited its usefulness in the class and lecture-room.

While making a study lately of the changes in the shape of the body produced by habits of posture, it occurred to me that a model of the trunk could be constructed which, in a measure, would obviate this difficulty, and I asked Mr. Julius Pfarre, of Messrs. Tieman & Co., to make one after my plan. He did so, and I have found it so useful that I take pleasure in recommending it to teachers of anatomy, orthopædics and hygiene. I have named it a "Posture Model."

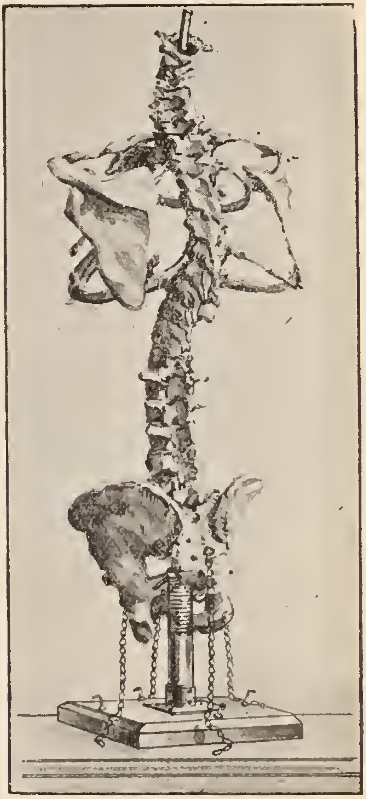
It differs from the skeleton of the trunk, as ordinarily "set up," by having the spinal vertebræ strung upon a piece of lead pipe, through which is drawn a piece of coarse copper wire (to modify its flexibility). To permit free movement of the spinal column, but three ribs are used on each side.

The pelvis is supported upon a firm spiral of wire, which in turn rests upon a small platform of board. By this device anterior and lateral obliquity is obtained.

Instead of using the skull and arm bones (which make the model clumsy) a papiér maché "globe" and a pair of light Indian clubs can be attached when needed.



MOD^{L} BY ELIZA M.MOSHER.



MOD^{L} BY ELIZA M.MOSHER.

This model is especially useful to illustrate curvatures and rotation of the spinal column, the changes in shape which it necessarily undergoes in maintaining the body in equilibrium with the pelvis in anterior or lateral obliquity. It may also be used to demonstrate the influence of the various postures of the arms and head upon the shape of the spine.

THROMBOSIS OF A VARIX OF THE SAPHENOUS VEIN, SIMULATING IRREDUCIBLE FEMORAL HERNIA.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to the Methodist Episcopal Hospital and to St. Mary's Hospital, Brooklyn, N. Y.

Read before the Brooklyn Surgical Society, March 2, 1893.

On January 14, 1893, I was requested by Dr. J. G. Atkinson of this city to visit in consultation Mrs. C., aged twenty-eight. The following history was obtained: For eight years past she has noticed a tumor at the upper and anterior aspect of the thigh, which would grow larger as she stood upon her feet and diminish in size as she assumed the recumbent position. She frequently "put it back," as she expressed it, and as long as she lay down it remained reduced; but upon rising it resumed its former size. Extensive varices in both lower extremities were visible.

About a week prior to my visit she had an attack which simulated an attack of intermittent fever; she had suffered from malarial troubles several years previously. The rigor which occurred at the time above mentioned was followed by fever; after a day or two she had, as she supposed, fully recovered from the attack. At this time she noticed nothing particularly wrong in the tumor, but after an interval of a day the first symptoms returned, this time the chill and fever being accompanied by some local distress and tenderness about the former. She then took to her bed, and found that the tumor did not, as upon previous occasions, recede, but, on the contrary, seemed to grow steadily larger and more painful to the touch. Her bowels were somewhat constipated at first, but a fair movement was obtained by the use of a cathartic upon the morning of the day preceding my visit.

Examination.—Inspection reveals a tumor reaching from Poupart's ligament down the middle of Scarpa's space for a distance of fully four inches, and in an obliquely transverse direction, following somewhat the line of Poupart's ligament, and reaching from the inner edge of the sartorius muscle to the outer edge of the adductor longus. In other words, it stretched across the entire width of the base of Scarpa's triangle. The growth felt solid to the touch and was excessively tender upon being manipulated. No impulse could be detected and the percussion note was dull. No fluctuation could be detected. The patient's general condition was good. No vomiting had occurred, but nausea had been complained of. The pulse was 110 and the temperature 103.8°. She said she had not been able to expel gas since morning; no tympanites was present. The femoral artery could be felt above the upper limit of the middle of the tumor, and evidently passed, in its normal direction, beneath the latter.

I ventured the opinion that the tumor was not a hernia, this being based: 1st, upon the absence of impulse; 2d, the shape of the tumor; 3d, the fact that Poupart's ligament could be traced its entire length, instead of being partially overlapped by the tumor, as frequently occurs in femoral hernia. While the history of the case prior to the last week was such as to suggest the existence of either a hernia, or, as suggested by the varices of the limb, a varix of the saphenous vein, yet the absence of reducibility at the time of the examination would seem to negative this. The exquisite tenderness and rapid increase in size, taken in connection with the pain and elevation of temperature suggested an inflammatory origin.

It was deemed expedient to clear the matter up by an exploratory operation, and the patient was sent to the Methodist Episcopal Hospital for that purpose.

On the following day, the patient having been properly prepared for operation under ether, the tumor was exposed by a curvilinear incision skirting its outer and interior border. The resulting flap of skin was turned back, and the superficial fascia found to be intimately adherent to the anterior surface of the mass. This, together with the latter, was isolated from the lower and posterior attachments and lifted from the fascia lata. It was then found to be a large varix of the saphenous vein. Several branches as large as a lead pencil led into the mass; these were ligated in turn and the varix finally isolated well up into the saphenous opening, where the trunk of the vein was ligated and the varix removed, together with some adherent superficial fascia.

The varix was found to be the site of a large thrombus, which had given rise to the solid consistency of the tumor and the fact that the latter suddenly failed to reduce itself, as heretofore, when the patient assumed the horizontal position. Inflammatory changes were present, evidently from some infection occurring either from some microörganisms in the blood itself, or from an invasion of the clot by these agents from a subcutaneous or subfascial inflammatory focus.

The wound was completely closed, no drainage being employed. The patient rallied well from the operation. The temperature gradually fell from 103.8°, reaching the normal on the third day. Absolutely no medication was employed save a dose of sulphate of magnesia on the day following the operation.

The specimen removed showed an unusually large varix. The most dilated portion was the size of an English walnut, the vein itself, in the entire length of the part removed, also showing considerable enlargement. The tumor is entirely obliterated by the presence of a thrombus.

Remarks.—This case belongs to the class in which thrombus occurs from dilatation and venous stasis, the so-called dilatation thrombosis. The convoluted condition of the vein, as shown by the specimen, produces a marked retardation in the force of the current of blood, and an over-accumulation of carbonic dioxide occurs. This results in a disturbance or destruction of white blood-corpuscles, and the fibrin ferment, upon which coagulation of the blood depends, is set free. Under these circumstances the thrombus is at first of the valvular variety, and is increased by fresh deposits until the entire tumor of the vein or varix is obliterated.

The prognosis in these cases of dilatation thrombosis relates principally to the dangers which arise from the loosening of portions of the clot and transportation to other parts, of portions of the fibrinous mass by the circulation. These dangers are increased by the possibilities of septic conditions occurring in the clot, and the entrance of bacteria into the blood. This is particularly apt to occur where collateral branches are present at the point where the clot terminates. The conditions present at the root of the saphenous vein, where large collateral branches exist, favor the occurence of the accident at this point. In the present case, although no metastatic abscesses developed, it is believed that the occurrence of the rigor and fever were due to infection having its origin in septic conditions of the clot, and that minute portions of the latter, loaded with septic material, found entrance into the general circulation.

The differential diagnosis of femoral hernia from varix of the saphenous vein as a rule is not difficult. Attention to but a single point, as a rule, is necessary. This point relates to the fact that, when the varix is diminished or reduced by pressure, and the patient assumes the upright position, the finger being held against the crural ring in such a manner that a femoral hernia, if such existed, could not escape, the tumor reappears from filling of the varix. In the present instance this test could not be applied because of the presence of the thrombus. In fact, it is fortunate that the exquisitely tender condition of the parts, and the complaints of the patient upon manipulation prevented the attempt to reduce the swelling by taxis, else larger portions of the thrombus might have been forced into the circulation, with resulting embolism in the branches of the pulmonary artery, if not arrested en route.

In view of the existent doubt as to the character of the tumor, and the evident presence of septic fever, which, in all probability, had its origin in the mass, it is believed that the exploratory operation was fully justified. In the light of the developments arising as the result of the operation there can scarcely be two opinions that the treatment adopted was the best suited to the condition as found.

AN INTER-DENTAL SPLINT FOR THE PREVENTION OF TONGUE BITING, ETC., DURING SLEEP.

BY D. W. BARKER, M.D.S.

The object of this device is to prevent a patient who is subject to epileptic attacks at night from biting the lips, cheeks and tongue. It consists of two hard rubber splints made to fit snugly upon and enclose the lower bicuspids and first molar tooth on both sides of the mouth, and united by a heavy gold wire which passes outside the lower front teeth; from the lingual surfaces of the splint two fins of rubber arise and are so placed and shaped that when the jaws are at rest the fins pass up on the palatine side of the upper teeth, thus preventing the tongue from getting between the teeth; on the inner surfaces the fins are made somewhat concave, thus forming a place in which the tongue lies. The upper bicuspids and molar teeth are allowed to strike the rubber on their palatine cusps only, thus avoiding biting the cheeks against the rubber; the thickness of the splints prevents the front teeth from coming together by about an eighth of an inch and so prevents biting the lips and tip of the tongue.

The device is not sufficiently bulky to fill the mouth of the patient to an uncomfortable degree and does not interfere with the ordinary functions of the mouth; the patient can breathe, swallow, and talk naturally, but cannot bite himself if he tries; the splint fits the teeth so tightly that both hands are required to remove it, and, therefore, no accident can result from its accidental dislodgment; it is to be worn only at night, and in the three cases in which it has been tried it has proved entirely satisfactory.

The first illustration shows the teeth of a man about fifty-five years of age, whose teeth have been worn down very much, leaving sharp, jagged edges. He is subject to epileptic attacks at night only, during which he gnashes his teeth violently, and in so doing his tongue and cheeks are lacerated so badly as to interfere seriously with speech and mastication He has been wearing the splint six months and has not bitten himself once while wearing it.

The second case is that of a man about forty years of age who also has epileptic attacks at night; his teeth are not worn down quite so much as the first but the results of the biting were quite as bad. He has been wearing the splint about six months with the same success that marks the first case.

The third case is really the first in point of time. It is that of a man about fifty years of age, with a splendid denture; he is not subject to epilepsy; but gnashes his teeth in his sleep; he has been wearing the splint for a year and a half and it was for him that the splint was invented. When first seen his tongue was so cut, bruised, and swollen that he could scarcely articulate a word; he dared not go to sleep knowing that further mutilation was sure to result, and was upon the point of having his teeth extracted to obtain relief. The splint is equally successful in this case as in the others.

The splints made for these cases, while following the design illustrated in the first case, are varied to meet the individual requirements of each case.

DISCUSSION.

Dr. Barber: In some of these splints I notice that the opening between the plate is much wider, and I should think possibly the patient's tongue might get above that and be compressed and do some damage, although it would not get between the teeth.

Dr. J. C. Shaw: The Doctor has shown me the splint and I made some criticisms on that. Its use is limited to the night; but otherwise it works well and the splint does not get out of the mouth. It seems to me it is a very good device indeed. It is a pity one cannot be made to be worn in the daytime, but it interferes so with the speech of the patient, that that is hardly possible.

Dr. Barber: Cannot it be made wider: would the tongue interfere at all if the plate were made to lap over further on the tongue?

Dr. Barker: The width must be governed by the height of the vault, and scarcely two vaults are alike. None of these patients has reported a case of biting the tongue between the rubber and the roof of the mouth. The tongue is confined in its action pretty closely by the muscles of the lower jaw, and an analysis of the movements of the tongue during speech shows that it touches the hard palate comparatively little in the upper portion of the vault. In speech it touches the portion of the palate adjoining the bicuspid and molar teeth, but hardly more than a quarter of an inch above the teeth. It scarcely touches the roof of the mouth and it requires considerable effort to get the tongue up there, and when you get it there the jaws are pretty well closed.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

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Committee on Prize Essays—Drs. Franklin Townsend, Albany; A. Walter Suiter, Herkimer; Charles Stover, Amsterdam.

Committee on Publication—Drs. F. C. Curtis, Albany; William Warren Potter, Buffalo; F. D. Bailey, Brooklyn; C. H. Porter, Albany.

The next annual meeting of the Society will be held in Albany, N. Y., February 5, 1895.

Frederic C. Curtis, Secretary,
17 Washington Avenue,
Albany.

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EDITORIAL.

SMALL-POX IN BROOKLYN.

The announcement by Dr. T. M. Rochester, president of the Kings County Medical Association, that the April meeting of that society will be devoted to a discussion of small-pox should result in a full attendance not only of its members, but of the entire profession, to whom a cordial invitation is extended by the president. The papers which serve as topics are as follows: "The History of Small-Pox," by Dr. R. M. Wyckoff, Deputy Commissioner of Health; "The Present Condition of Small-Pox in Brooklyn," by Dr. F. A. Jewett, Superintendent of the Contagious Disease Bureau of the Department of Health, and "The Differential Diagnosis," by Dr. F. C. Raynor, Secretary of the Association. Invitations have been extended to physicians having had special opportunities, to give the benefit of their experience.

The place of meeting is at Wurzler's Building, 315 Washington Street, and the time, Tuesday evening, April 10th, at half-past eight o'clock.

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PREVENTION OF TUBERCULOSIS.

The recommendations which the Medical Society of the County of Kings passed at its last meeting, to be sent to the Commissioner of Health, in reference to the best means of restricting and preventing the spread of tuberculosis, will be published, with the full discussion which took place, in a future issue of the JOURNAL.

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DR. CHARLES S. FISCHER.

Dr. Charles S. Fischer, valedictorian of the class of 1887, Long Island College Hospital, who also served a term as interne in the

Hospital of the College, received last December, at Strassburg, Germany, the degree of Doctor of Philosophy. This is the degree which is given by the faculties of science at the various universities on the Continent. Dr. Fischer took the entire course of physiological chemistry at Geneva and Strassburg. Before his return to America next winter he will study, under Ewald at Berlin, the methods for examination in diseases of the stomach.

ASSOCIATION OF ACTING ASSISTANT SURGEONS.

A bill has been introduced in Congress providing for the commissioning by the President of those who during the War of the Rebellion were acting assistant surgeons in the United States service. No pay or allowance is to be made by virtue of the proposed act. This measure is intended to relieve these surgeons from the disability under which they now rest, by reason of which, not having previously been commissioned but employed by contract, they cannot gain admission to the Loyal Legion or the Grand Army of the Republic.

We do not imagine there will be any opposition to this proposition, which is nothing more than an act of justice to medical men who, when the country's need was greatest, promptly responded to her call; but as there is always doubt about the passage of a bill, however meritorious, we would urge upon our readers to use their influence with members of Congress and other influential persons to do what they can to secure its passage.

FATHERS OF MEDICINE.

The portraits in this number of the JOURNAL, are of two celebrated anatomists, one of whom, Winslow, is commemorated by the foramen which bears his name.

Though Jacob Benignus Winslow was a Dane by virtue of having first seen the light on the Island of Fuhnen, and is spoken of by a biographer as "an honorably born Dane, who became a zealous Catholic, and in 1732, at the Jardin des Plantes, an Academicus," he is generally claimed as the ablest of the French anatomists of the eighteenth century, through having spent his professional life in that, his adopted country.

The other portrait is that of Philip Verheyen (sometimes written Verheijen), the Professor of Anatomy in Louvaine.

The biographies which we give elsewhere, were translated by Prof. Henry W. Schimpf, of the Brooklyn College of Pharmacy from Gurlt's "Biographisches Lexikon der Hervorragenden Aertzte Aller Zeiten und Völker."

PROCEEDINGS OF SOCIETIES.

BROOKLYN SURGICAL SOCIETY.

Meeting of November 2, 1893.

SCIENTIFIC BUSINESS.

Paper by Dr. H. D. Cameron, " Practical Hints on Anæsthetization."

Presentation by Dr. Friend of a sample of sheet aluminum.

Dr. Friend : I have thought this sheet aluminum might be used in surgery for splints. I should like to know the disadvantages of it. The advantages of it are that it gives us a very strong but light splint. It comes in various thicknesses. This is about $^1/_{40}$ of an inch thick. I am told that it keeps its lustre, it does not tarnish, it can be easily bent and set in position ; that it can be easily cut and perforated. Those are some of the ways in which it might prove of an advantage over the ordinary wire splint. A piece of aluminum of the same thickness as wire would be much lighter, and it does not corrode as wire does. You can bend it as easily, and in fact a piece of this metal even thinner than this, would be much stronger than wire.

The disadvantage of a wire splint is, that after a time the zinc gets corroded, the wire tends to fall apart, and the ends get loose and stick through the dressing becoming, after awhile, uncomfortable.

This metal perforated could have exactly the same advantage as to porosity as the wire. I have here a specimen of both unannealed and annealed aluminum. Formerly, this was very expensive. A year ago it cost $1.50 per ounce, now it can be obtained for $1.50 a pound. A piece $^1/_{40}$ of an inch thick, covering 300 square inches, would be a pound, or a piece of the same thickness five inches wide and five feet long would contain a pound.

Sheet aluminum can be had three feet wide, and of any length required in surgery.

Dr. Burge : I do not suppose anybody has any practical experience with it. I have never heard it suggested before for use as a splint, but it strikes me as being a very practical suggestion, and

I believe a good use could be made of it. It is light, strong, durable and clean, and easily molded.

Dr. Wunderlich: Whoever wants to make use of aluminum will do well not to let any hydrochloric acid come near it, because one drop of the acid will destroy the metal.

BROOKLYN GYNÆCOLOGICAL SOCIETY.

Meeting of November 3, 1893.

The President, Dr. Charles Jewett in the chair.

Paper of the evening, "A Note on Asepsis in Obstetric Practice," by Dr. O. A. Gordon.

Dr. George E. Law was elected to membership.

PRESENTATION OF SPECIMENS.

Dr. J. L. Kortright submitted the following specimens with their histories:

1. Epithelioma of the vulva.

The first specimen is from a case of epithelioma of the vulva in a woman sixty-four years of age, who had complained for nearly a year of great itching and pain in the vulva. The growth evidently commenced in the clitoris and showed characteristic nodules all over both labia minora and upon the inner surfaces of both labia majora. There was no involvement of the inguinal glands. The operation consisted in splitting both labia majora and removing their inner halves with the labia minora. The clitoris was amputated and the vestibule removed down to the meatus urinarius, which was not involved. I show the specimen for the single purpose of impressing upon the Society the necessity of always removing both vulvo-vaginal glands when the growth is in their vicinity, even if they are apparently not involved, as the only sign of recurrence is a small ulcer at the location of the gland at the left side. It was easy to bring the skin together in the median line and sew the edges of the skin to the remains of the labium minus of each side, and make a very good appearing vulva when the wounds had healed.

2. Tumor springing from the labium majus.

This specimen is of no particular interest, except that patients seek medical aid so promptly that the tumor does not have a chance to get so large. This is a myxoma taken from the inner aspect of the left labium majus of a woman about fifty-four, the mother of thirteen children, of whom the youngest is four years old. She is still menstruating regularly. The tumor has been growing slowly for eight years till about two months ago, when it suddenly took on rapid growth till it hung by a long slender pedicle as far as the knee. The tumor itself is ovoid, and measures two inches in its longest diameter.

3. Inversion of the uterus.

This specimen I to-day received from my colleague Dr. Clayland, who performed the autopsy for the coroner. The patient, a young woman in her first pregnancy, was delivered by a midwife. Finding her patient in a bad condition after delivery, the midwife sent for two physicians, but before they could do anything the woman was dead of hæmorrhage.

Here is the uterus just as it was removed from the woman, cut off at the cervico-vaginal junction. The inversion is complete. The placental attachment is very well shown, and also the gross anatomy of the uterus at term. There is a fibroid in the wall of the uterus.

I have personally seen only one case of inversion of the uterus. I was once called to assist another physician who had been called to just such a case as the one shown this evening. A midwife had made the delivery, and before our arrival the patient had fainted two or three times, and the pulse was gone at the wrist. We reduced the uterus, but the patient promptly died of shock and hæmorrhage.

Dr. Jewett: Was there anything in the history of the case that would throw light on possible causes of hæmorrhage other than the fibroid?

Dr. Kortright: No sir; nothing was known of the case but that; there were no details at all.

Dr. Jewett: Is not the fibroid located at about the isthmus? The hæmorrhage was unusually rapid and so copious, bleeding could not have occurred unless the contraction of the uterus was feeble. It sometimes happens that the contraction is sufficient to ligate the neck of the uterus so as to control hæmorrhage in great measure. Was the seat of the fibroid such as to interfere with the ligation of the cervix? Uterine fibroids, we all know, are very apt to lead to post-partum hæmorrhage when the uterus is not inverted.

Dr. L. G. Baldwin, (examining specimen): I should say it was a sub-peritoneal fibroid near the cervix on the anterior surface.

Dr. Jewett: If it is distinctly sub-peritoneal it would not have so much to do with causing the hæmorrhage.

(After examination, Dr. Kortright confirmed Dr. Baldwin's opinion that the fibroid was located on the anterior wall near the cervix.)

Dr. Jewett: It would be interesting to know, if the history could be got at, how far the midwife was accountable for the inversion.

Dr. Kortright: Of course, in cases like that it is impossible to get details; they always deny using any force or pulling on the cord.

Dr. Jewett: What is your method of reinversion?

Dr. Kortright: In my single case it was simply and easily performed, but the woman was so far gone it was of no avail. I simply doubled my hand into a cone and pushed the middle of the fundus up into the cervix. Some operators have held to the opinion that the last part down should be the first part up, but I found it easier to reverse this order.

Dr. Jewett: Noeggerath made the point that by beginning the reinversion at the insertion of the Fallopian tube reposition is much easier than when attempted at the top of the fundus.

Dr. Kortright: The myxoma was attached to the labium majus and hung down about to the knee on the inside of the thigh.

Dr. Jewett: In the first case were the inguinal glands involved?

Dr. Kortright: No sir; it was a matter of about a year, and there was no involvement of the inguinal glands.

NARRATION OF CASES.

Dr. Walter B. Chase: Just in the line of our discussion to-night, was a case I saw on Long Island two or three weeks ago, of mild puerperal septicæmia following labor at full term, in which the condition obtained to which our President has referred, viz., imperfect drainage from the anteverted condition of the uterus after labor. The physician in charge told me there had been very little abnormal discharge; only once it seemed to be offensive and then temporarily; there was no great rise of temperature, only slight chills, and the general condition of the patient was fair, except that she was suffering from violent hemicrania. On making an examination I found the cervix sufficiently patulous to admit my finger, and I was satisfied from the odor that there was decomposition going on in the uterine cavity. I put the woman in Sims' position, and making traction to bring the cervix forward and downward a little to use the curette, there was an immediate gush of three or four ounces of brown, offensive material which remained where it had accumulated in the uterine cavity, from the fact that the fundus was on a lower level than the external os. There was some debris which was curetted away, the uterus very thoroughly douched with a five per cent. carbolic solution, and an iodoform suppository introduced into the uterine cavity and allowed to remain there, and the patient made a good recovery. That is the only case that has ever come under my observation where causes purely mechanical prevented drainage from an anteverted condition of the uterus. The fundus rested forward almost on the pubes, and the cervix was high up, resting against the rectum.

A regular monthly meeting of the Brooklyn Gynæcological Society was held at the Society rooms, December 1, 1893. The President, Dr. Charles Jewett, in the chair.

Dr. J. W. Hyde presented the paper of the evening entitled "Methods of Drainage, with some Remarks on a New Aseptic Drainage Tube."

Discussion by Drs. Chase, McNaughton, Raymond, Emery and Jewett.

PRESENTATION OF INSTRUMENTS.

Dr. W. B. Chase: I have here an instrument for which there is no great claim for merit. It is a retractor which is a double one, having a curved hook on each end. Perhaps its value consists in its lightness and strength, and not least of all the fact that it can be rendered aseptic. It has this advantage, that there are no rough or angular surfaces and can be placed in any serous or mucous cavity without doing injury to the lining membrane thereof.

Mr. Haslam made this for me. It is made of steel wire which has been nickel plated.

Dr. McNaughton: It has the advantage of giving you two sizes on one instrument—two retractors, one at each end.

Dr. Jewett: Is it made specially for abdominal work?

Dr. Chase: Yes, sir; principally for that, but it can be used in any serous or mucous cavity.

Dr. Raymond: It would seem to me to have this advantage, the facility it offers to tie a vessel in the skin or muscle. This brings it perfectly into view and with it one could turn out the edge of the wound and find the vessel with great ease.

Dr. Jewett: I expected to have some instruments here this evening relating to a matter of interest—a new method of exploring the bladder. It is a method by which the entire interior of the bladder can be examined with the same ease and certainty that you look into the throat; also the mouths of the ureters and the whole length of the urethra. I saw the method demonstrated by Dr. Howard Kelly, of Baltimore, who is its author. He uses first a series of graduated dilators with which he dilates the urethra up to a diameter of 10 to 20 millimeters; 10 millimeters answers for ordinary inspection—14 if the operator has had no previous experience; 20 is the largest ever used. He goes up to 20 millimeters without resulting incontinence. The bladder is thus examined in sections through a urethral speculum of sizes corresponding to that of the dilated urethra, with the aid of a hand mirror or, if both hands are engaged, a head mirror.

He now employs this method for catheterizing the ureters. The mouth of the ureter is engaged in the mouth of the speculum and the catheter passed directly by sight. He also uses it for cautery and other therapeutic procedures in the bladder. He passes in through the speculum a long, delicate forceps and takes out small foreign bodies. The method will do away with the electric cystoscope and sweep away much of our present method of treatment. Dr. Kelly calls attention to the fact that Simon years ago dilated the urethra for exploration by the touch, but the method of dilating and exploring by the sight is original with Dr. Kelly.

Dr. Raymond: Did you see him pass the catheter through the ureter?

Dr. Jewett: He did not succeed, but it was the only case in which he has failed.

Dr. Raymond: Did he bring the orifice of the ureter into the speculum ?

Dr. Jewett: He did not find it in this case. He tried to engage it and probed for it, but he did not succeed in getting it. The time, however, was limited, the patient being under ether waiting for an operation.

Dr. McNaughton: Did he use sunlight or artificial light?

Dr. Jewett: He tried sunlight, but he generally uses an electric light or an Argand burner. His speculum is like the Ferguson vaginal speculum in shape, but the distal end is cut at right angles. His dilators are 5 or more inches in length, made on the principle of the urethral sound, slightly curved and of graduated sizes. He uses millimeters for his scale and diameters instead of circumferences. He dilated up to 14 millimeters, but rarely uses more than 10. The patient is placed in the knee-chest posture, under the anæsthetic, or in the dorsal position with the hips very much elevated, so that the bladder falls away and the whole cavity is more or less open. The urine is taken out at frequent intervals so as to keep the field free and clear. He makes some new discoveries with this method. He finds, for example, that the majority of cases of functional disturbance of the bladder, so considered, prove, under direct examination, to depend on organic disease of the mucosa. The method is certainly exceedingly simple and valuable.

Dr. Emery: Has Dr. Jewett an instrument of this kind in his possession?

Dr. Jewett: No, sir; there is a series of them; a series of specula and dilators, also a calibrator.

Dr. McNaughton: He uses only the head mirror?

Dr. Jewett: The light is thrown in directly from the head or hand mirror? It is much simpler than cystoscopy by the old method.

Dr. Raymond: Does he use the same catheter that he formerly used?

Dr. Jewett: The catheter is a small flexible one of the kind used in urethral stricture in the male. This he carries into the pelvis of the kidney. He can even, I believe, use it for washing out the renal pelvis. The ureteral catheter passed and left in situ during operative work, serves to point out the location of the ureter, and thus to guard against ureteral injuries in certain abdominal or pelvic operations.

THERAPEUTIC NOTES.

FERMENTATIVE DYSPEPSIA.

For this form of dyspepsia Professor Austin Flint prescribes bismuth subgallate, in ten grain doses, either in capsules or tablets, three times daily after eating. If constipation exists, he recommends the use of Villacabras water, giving before breakfast enough to produce two or three evacuations ; for two or three days after a daily movement follows. The water may then be repeated, if necessary.

PROGRESS IN MEDICINE.

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.

NASAL HYDRORRHŒA.

C. E. Bean. (American Laryngological Association). The majority of cases of nasal hydrorrhœa are due to injury to base of brain; others have no apparent local cause. This paper deals with these last. They occur always in catarrhal subjects. The onset is sudden. No premonitory symptoms. Sneezing is frequent and violent. There is no dry stage, but from beginning a profuse serous discharge, which may be periodic or continuous. In some cases there is conjunctivitis associated with frontal headache. The lining membrane of nose during attack appears swollen, pale and sodden. Tissues saturated with serous fluid that constantly exudes. The membrane may nearly fill the nasal cavities. This condition may entend to posterior nares. The affection may last days or weeks, occasionally eventuating in bronchitis or asthma. The disease is generally unilateral. Between the attacks the nasal membrane may appear normal or hypertrophied. It occurs in people of neurotic temperament. It has been attributed to paralysis of trifacial nerve, to myxomatous degeneration of antrum or to pressure of polypoid growths.

No positive line of treatment can be stated. Cocaine may give temporary relief, but is positively injurious. The galvano-cautery has produced but little good. Strong antispasmodics vigorously used have given best results. Change of residence to non-irritating climate has benefited these patients.

TREATMENT OF OZŒNA AND RECURRENT NASAL POLYPI BY OPENING AND DRAINING THE ANTRUM OF HIGHMORE.

Robertson. (Journ. Lar. Rhin. & Otol., Vol. VI., No. 9.) The mucous membrane of antrum is affected in all cases of ozœna—resulting in

1. Impairment of bony walls of antrum, inferior turbinates and teeth.
2. Stenosis of openings into antrum.
3. Formation of fluid, pus or white curds, filling cavity or osseous outgrowths.
4. Abolishment of physiological function of antrum.
5. Involvement of intra-nasal structures and impairment of their functions. The best operative treatment is free incision

through anterior wall of antrum and curetting of interior. Following such procedure crust formation and odor of ozœna ceases.

Recurrent nasal polypi always cause involvement of antral mucosa; which in turn perpetuates the nasal disease. Polypoid degeneration of antral membrane frequently accompanies nasal polypi. In such cases the surgical opening of anterior wall should be of sufficient size to admit of ocular and digital examination.

The operator uses mallet and chisel. Where so extensive a procedure is not possible an ordinary gimlet is used to effect perforation after application of cocaine—an operation as effective and much less painful than entering antrum through nasal cavity.

PACHYDERMA LARYNGIS.

Dr. Milligan. (Journ. Laryngology, Vol. VII., No. 8). This disease attacks generally the posterior extremities of the vocal bands, but may be diffused over the entire interior of the larynx. Normally the larynx is lined by stratified columnar epithelial cells.

The epiglottis, inter-arytenoid space, the vocal bands, the superior surface of the ventricular bands are covered by stratified pavement epithelium. In pachyderma laryngis the following changes are to be noted :

Marked thickening of epithelial covering, multiplication of the papillæ, increase of the number of the blood-vessels and enlargement of their lumen. The manifestations of this disease are oval swellings on the side of the vocal processes, the centre of one swelling showing a depression, presumably caused by the pressure, during phonation, of the firmer apex of the opposite tumor.

The affection is found more frequently in male than female subjects, and in those who smoke and drink to excess. It is found also as an accompaniment of tubercular, syphilitic, and malignant disease of the throat, but this paper refers to an idiopathic pachyderma.

Most of the evidence upon the nature of these tumors shows them to be of a benign nature, although Klebs believes them to be the forerunner of cancer.

Occasionally there is ulceration of the mucous membrane, perichondritis and chondritis. Hoarseness, dyspnœa on exertion, slight pain in swallowing, shooting pains in the sides of the neck toward the ears.

Tissier recommends the removal of these growths by forceps.

The author advises more simple treatment. Small doses of iodide of potash and locally a solution of acetic acid.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

A TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE BY AMERICAN TEACHERS. Edited by William Pepper, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. In two volumes. Illustrated. Vol. II. Philadelphia: W. B. Saunders, 1894.

A brief mention of the first volume of this work appeared in a former number of the JOURNAL. The second volume comes, like its predecessor, in very attractive form. The contributors are: Professors Welch of Baltimore, Lyman of Chicago, Osler of Baltimore, Pepper of Philadelphia, Delafield of New York, Wilson of Philadelphia, Fitz of Boston, and Holland of Philadelphia.

In so recent a work one would naturally expect to find all the old in theory and practice that was good, with the new, and even hints as to the future.

From Professor Welch may be learned that there are four ways to produce artificial immunity. The first of these is by inoculation of cultures containing the microörganisms; the second is by inoculation of attenuated microörganisms; the third is by injection of some of the products produced by the microörganisms, and the fourth is by injection of serum or other fluids from animals rendered immune from the disease.

Professor Lyman, among many other thoughts, states that the exciting cause of saccharine diabetes is frequently some acute or chronic cerebral disease. He also gives a detailed statement as to the various hypotheses relative to the nature of the disease; local injury of the nervous system; changes in the ferment of the pancreas; disturbance of the glycogenic function of the liver; excessive hepatic activity; muscular activity, affecting glycogen; failure in oxidation; changes in oxygen, as it goes through the system; insufficient alkalinity of the plasma. He mentions the following conditions as being present in diabetic coma: pupils dilated (but will react); extremities cold; temperature subnormal; muscular relaxation.

Professor Wilson gives a long list of remedies for that most distressing condition, laryngeal tuberculosis: Sprays of biborate of soda, of hydrogen dioxide; solutions of tannic acid, nitrate of silver, sulphate of zinc; insufflations of aristol and morphine; menthol and olive oil as an application or spray; cocaine; lactic acid for the ulceration, and many simple palliative measures are recommended.

Professor Delafield, in the article on pneumonia, quotes from the statistics of the Massachusetts General Hospital, showing that the treatment of pneumonia has been embarrassed in the attempt to reduce the mortality by many conditions in the patient that are frequently not mentioned. After giving old and modern methods of treatment he believes most in a modification of the dosimetric treatment. For the strychnine he substitutes whiskey, thus making the combination: aconitine, digitaline and whiskey.

Professor Holland, on page 622, gives a most valuable hint as to the importance of peptone and albumose in the urine. They may point to internal suppuration. Albumen must be removed, if present. The urine is then to be poured into a test-tube containing a column of Fehling's solution, about an inch in depth. At point of contact a white zone will appear, due to the phosphates: above this, if peptone and albumose be present, a pink halo shows. This is the biuret test.

Professor Pepper gives as the symptoms and signs of appendicitis: premonitory pain, like a colic, that is localized; tenderness; constipation, alternating with diarrhœa; sometimes nausea and vomiting; then soon abdominal pain, diffuse, then localized; this in right iliac region; movement or pressure increases it: patient may lie on right side with right leg drawn up; pain is constant; fever and fever pulse; tenderness at McBurney's point, found by drawing a line from the right anterior superior spine to umbilicus, and pressing at a point one and a half or two inches from the spinous process; swelling about cæcum, found by palpation; if deep seated, when patient is under ether; or by rectum.

Professor Fitz gives faradization as a means of treating ascites. A strong current over the abdominal muscles should be used for ten or fifteen minutes. If successful the amount of urine increases and the swelling goes down.

Professor Osler writes of the good results of thyroid extract in myxœdema. The treatment heretofore has been palliative. New "brilliant results" in physical and mental condition are obtained.

The work consists of 999 pages, of which the editor, Professor Pepper, contributes 324, or thirteen of the articles. Historically, scientifically and practically the work is of great value. HENRY CONKLING.

PSYCHOPATHIA SEXUALIS, WITH ESPECIAL REFERENCE TO CONTRARY SEXUAL INSTINCT. A Medico-Legal Study. By Dr. R. von Krafft-Ebing, Professor of Psychiatry and Neurology, University of Vienna. Authorized translation of the seventh, enlarged and revised, German edition. By Charles Gilbert Chaddock, M.D., Professor of Nervous and Mental Diseases, Marion-Sims College of Medicine, St. Louis, etc. In one royal octavo volume, 436 pages. Extra Cloth, $3.00 net; sheep, 4.00 net. Sold only by subscription. Philadelphia: The F. A. Davis Company, Publishers.

This work is already so widely known that any extended notice is hardly demanded. The author is one of the recognized authorities on parasexualism, if such a term be admissible. It seems to be almost a law of our existence that the highest and noblest sentiments and realities shall be contrasted with others correspondingly low and vile. Further, it is the view of many that the sexual instinct is the prime incentive and eventually the source of all that makes life in this world of value. Krafft-Ebing's thorough systematizing of the subject is admirable. It has been queried by some whether a writer so thoroughly master of this subject could himself be normal. It ought not to be necessary to answer this. Any medical man of clinical experience, wide reading and the subjective sensations that even the most prudish male, if but normal, must undergo, can pretty closely recognize all that such a master work offers. Or to imagine that any genuine medical man can be injured by properly studying this work seems to the reviewer but baby-talk. For non-medicals it was not intended and is most unsuited. WILLIAM BROWNING.

THE TWENTY-FOURTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS, BOSTON, 1893.

This volume lies before us, and although somewhat delayed in its publication, is welcome, as it shows the same high standard of work that the preceding volumes have shown.

The examination of the water supplies is still continued, and the Assistant Biologist, Gary N. Calkins, gives some interesting and valuable results in the subject of odors and tastes in water supplies, showing the relationship that the much neglected higher organisms bear to this subject.

The experiments at the Lawrence Station are of importance in determining the value of the filtration of sewage and also the efficacy of sand filtration for drinking waters.

To the physician the reports of Professor W. Sedgewick, Biologist of the Board, are of interest. Eight epidemics of typhoid fever are studied in detail, with the results of finding the locus of infection by typhoid excreta, in six through the water supply and two from the milk supply. The fulness of these investigations and those of the investigations of foods and drugs and the mortality studies make the volume one of importance. SMITH ELY JELLIFFE.

NEW TRUTHS IN OPHTHALMOLOGY, as developed by G. C. Savage, M. D., Professor of Ophthalmology in the Medical Departments of the University of Nashville and Vanderbilt University. Thirty-two illustrations. Published by the author, Nashville, Tenn., 1893.

This is a small book of 152 pages and consists of a series of papers, some of which have been separately published. It mainly treats of the insufficiencies and relations of the ocular muscles and the methods of treatment and operation. It is clearly written and contains considerable original matter. The book will hardly have a great sale, as it is intended for "ophthalmologists" ("who read"!), and is rather beyond the scope of the student. It contains, however, an excellent description of the methods of testing the extra-ocular muscles, and is well worth perusal. RICHMOND LENNOX.

AN AMERICAN TEXT-BOOK OF GYNÆCOLOGY, MEDICAL AND SURGICAL, FOR THE USE OF STUDENTS AND PRACTITIONERS. By Henry T. Byford, M.D., John M. Baldy, M.D., Edwin Cragin, M.D., J. H. Etheridge, M.D., William Goodell, M.D., Howard A. Kelly, M.D., Florian Krug, M.D., E. E. Montgomery, M.D., William R. Pryor, M.D., George M. Tuttle, M.D. Edited by J. M. Baldy, M.D. Forming a handsome royal 8vo volume, with 360 illustrations in text and 37 colored and half-tone plates. Price, cloth, $6.00; sheep, $7.00; half-russia, $8.00. W. B. Saunders, Publisher, 925 Walnut St., Philadelphia, Pa.

This treatise is another endeavor to present the views of several authors in composite form, at the same time relieving the ten contributors from "absolute responsibility for any particular statement." The difficulty of such an effort is apparent, but great credit is due the editor for the manner in which he has accomplished his task.

Nevertheless, whoever is familiar with the mode of thought and expression of the various contributors can, in many chapters, divine the impress of individual authorship. This is preëminently true in the portion of the work devoted to operative technique. The illustrations are admirable and give information which is difficult to convey by the most technical statements.

The charm and value of the work rests in its directness, conciseness and discrimination as to what should be said—leaving out the valueless and the injuriously perplexing. If particular mention was to be made of any portion of the work without disparagement to the rest, it would be on the examination of the pelvic organs, the technique of operations, pelvic inflammation and disease of the ovaries and tubes. The great need of to-day both in medical and surgical gynæcology is that of *positive knowledge*—of *fact against mere theory* or *opinion*, that truth which comes from *thoroughly exhaustive analysis*. It is this quality which enters so largely into this work, that constitutes its greatest value, and though open to criticism in certain statements, it is alike a credit to its individual and collective authorship and to the latest advances in American gynæcology.

WALTER B. CHASE.

A TEXT-BOOK OF OPHTHALMOLOGY. By William F. Norris, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania, etc., and Charles A. Oliver, one of the Surgeons to the Wills' Eye Hospital, etc. Illustrated with 5 colored plates and 357 woodcuts. Philadelphia: Lea, Brothers & Co., 1893. Pages, 641.

It is hard to see the need for new text-books on this subject, and yet perusal of this, the latest, shows it is well worth a place in the collection of both student and practitioner. It is a well printed and illustrated volume of 641 pages, arranged in two parts. The first, by Dr. Oliver, contains excellent chapters on the embryology, anatomy and physiology of the eye, optics, the methods of ocular examination, and the detection and correction of refractive errors. Much may be found here that is not usually contained within the limits of a text-book. Separate chapters are devoted to the ophthalmoscope and the "shadow test," and the ophthalmometer is described and its use and value explained. The chapter on the correction of refraction ends with an excellent statement of the methods of examining glasses furnished by opticians and the necessity for such verification. The second part of the work, by Dr. Norris, treats of clinical ophthalmology. It is conveniently arranged and well illustrated. Here the refractive errors are again somewhat briefly considered, the prophylaxis of myopia receiving special attention. With the actual paralyses of the ocular muscles are considered the insufficiencies, and Stevens is credited with his now generally adopted nomenclature. The author expresses himself, however, very conservatively as to the dependence of reflex epilepsy or chorea upon eye strain. This part of the work concludes with a description of the more ordinarily practiced operations on the eye. The book is well written, contains comparatively few typographical errors—although some occur in places where they may cause considerable confusion—and may be heartily recommended, not only to the practitioner but to the student, even when he already has a text-book on the subject.

RICHMOND LENNOX.

ESSENTIALS OF MINOR SURGERY, BANDAGING, AND VENEREAL DISEASES. By Edward Martin, A.M., M.D. Second edition, revised and enlarged. Seventy-eight illustrations. Philadelphia: W. B. Saunders. 1893. Pp. 166. Price $1.

This is No. 12 of Saunders' Question Compends, which have deservedly obtained so strong a hold on students of medicine. The arrangement of the subject in the form of question and answer is well adapted to bring out the salient and essential points, while at the same time it does not materially increase the size of the volume.

SYLLABUS OF LECTURES ON THE PRACTICE OF SURGERY. Arranged in conformity with the American Text-Book of Surgery. By N. Senn, M.D., Ph.D., LL.D. Philadelphia: W. B. Saunders. 1894. Pp. 221. Price $2.

The tendency which is apparent in medical schools to do more teaching by recitations than by didactic lectures makes such books as this Syllabus absolutely essential, not only for the student but also for the teacher. It certainly doubles the usefulness of a text-book, such as the American Text-Book of Surgery, to have such an outline given of its contents.

NASAL DOUCHES AND SPRAYS. By Jonathan Wright, M.D. Reprinted from *Medical Record,* January 14, 1893.

The author discusses the danger of douches and concludes by saying: "I do not wish to stand among those who disregard or attempt to belittle the danger of the douche to the middle ear, but in my experience there are certain chronic forms of rhinitis, characterized in general by a clogging of the glandular conduits, in which any other treatment, or rather any treatment that does not include cleanliness, stands so far below the nasal douche in its beneficial results, that I believe we are justified in running the slight risk of injury to the middle ear if we employ care in selecting cases and caution in the use of the remedy."

GLYCOSURIA AS AN ADDITIONAL SYMPTOM INDICATING THE NEUROTIC ORIGIN OF DERMATITIS HERPETIFORMIS (Duhring). By James McF. Winfield, M.D. Reprinted from the *Journal of Cutaneous and Genito-Urinary Diseases*, November, 1893.

A history of four cases in which glycosuria was present to a greater or less extent, in all of which the attacks followed some unusual mental exertion or severe nervous shock, showing an intimate relationship between the advent of the eruption and the reception of the shocks.

COCAINE INEBRIETY. By J. B. Mattison, M.D. Reprinted from the *Medical Record*, October 22, 1892, and July 14, 1893.

THE CURABILITY OF NARCOTIC INEBRIETY. By J. B. Mattison, M.D. Reprinted from the Cleveland *Medical Gazette*, September, 1892.

The author's conclusions are that narcotic inebriety is curable as other diseases are, but that in most cases the disease recurs; this recurrence does not prove failure in the first treatment, does not preclude success in a second. The number of permanent cases is large enough to favor a hopeful prognosis in many cases.

THE MATTISON METHOD IN MORPHINISM. By J. B. Mattison, M.D. Reprinted from the *Universal Medical Journal*, February, 1893.

HERNIA: ITS PALLIATIVE AND RADICAL TREATMENT IN ADULTS, CHILDREN, AND INFANTS. By Thomas H. Manley, A.M., M.D. Philadelphia: Medical Press Co. 1893. Pp. 235.

Dr. Manley's reading and observations have led him to believe that there is a widespread misconception as to the prime origin of hernia and its morbid anatomy, and also as to what surgery can do to relieve those who suffer from it without endangering their lives. In the preparation of this volume he has had these things constantly in mind, and has endeavored to give to each therapeutic resource its due merit, and to indicate the precise limitation of each.

The book is quite fully illustrated, and its study will, we are sure, well repay surgeons who are desirous of keeping themselves thoroughly informed on this most important subject.

ELEMENTARY PHYSIOLOGY FOR STUDENTS. By Alfred T. Schofield, M.D., M.R.C.S., etc., with two colored plates and other illustrations. Philadelphia: Lea Brothers & Co. 1892. Pp. 372.

In this manual the author has attempted to present the leading facts of physiology without discussing the various theories that have been proposed to account for them. It is a concise statement of the status of the subject at the present time.

OUTLINE OF PRACTICAL HYGIENE, ADAPTED TO AMERICAN CONDITIONS. By C. Gilman Currier, M.D. New York: E. B. Treat. 1893. Pp. 468. Price $2.75.

In this small volume Dr. Currier has succeeded in condensing a large amount of valuable material. It treats of all the topics usually discussed in similar works and many more besides, and does it in a practical and interesting way.

TWENTY-SEVEN YEARS ADDICTED TO OPIUM — RECOVERY — RELAPSE. By J. B. Mattison, M.D. Reprinted from *New England Medical Monthly*, March, 1893.

Among the deductions made by the author from this case are the following: 1. That the habitual use of opium is less pernicious than morphine, and morphine by mouth less damaging than subdermic taking. 2. That the reflex acts of quitting this form of opiate are less marked than after the hypodermic plan.

TRIONAL, THE NEW HYPNOTIC: ITS USE IN NARCOTIC HABITUÉS. By J. B. Mattison, M.D. Reprinted from *Medical News*, May 6, 1893.

In simple insomnia, doses of from twenty to thirty grains will suffice. In marked cases, from thirty to forty grains are best. Trionalism is possible. The effect of trional is more certain, pronounced, and prolonged than of sulphonal.

ETIOLOGY OF NARCOTIC INEBRIETY. By J. B. Mattison, M.D. Reprinted from *Weekly Medical Review*, February 11, 1893.

The author decries the needless, careless use, especially hypodermically, of morphine, believing that the risk of inebriety from this method is larger than any other.

MECHANICAL AIDS IN THE TREATMENT OF CHRONIC FORMS OF DISEASE. By Geo. H. Taylor, M.D. New York: George W. Rogers. 1893. Pp. 109.

Describes the postural or lifting couch for relieving pelvic affections, the chest developer, and discusses massage.

MISCELLANEOUS INVESTIGATIONS CONCERNING INFECTIOUS AND PARASITIC DISEASES OF DOMESTICATED ANIMALS. By F. L. Kilborne, V. A. Moore, E. C. Schroeder, Theobald Smith, and C. W. Stiles. Published by authority of the Secretary of Agriculture, Washington. Government printing office. 1893.

Among the exceedingly valuable papers contained in this report is one which treats of the presence of tubercle bacilli in the milk of tuberculous cows when the udder is not visibly diseased.

SOME REMARKS ON THE STRUCTURE OF ŒDEMATOUS NASAL POLYPI. By Jonathan Wright, M.D. Reprinted from *New York Medical Journal*, November 4, 1893.

These remarks are based on the study of 150 individuals, twenty-five of whom suffered from nasal polypi.

THE PRINCIPLES AND PRACTICE OF SURGERY. By John Ashhurst, Jr., M.D. Sixth edition, enlarged and thoroughly revised, with a colored plate and 656 illustrations in the text. Philadelphia: Lea Brothers & Co. 1893. Pp. 1166. Price $6.

In this edition the author has incorporated the most recent observations in surgical science and such novelties in surgical practice as he regards as improvements. An entirely new chapter on Surgical Bacteriology has been contributed by Prof. Charles B. Nancrede, of the University of Michigan. The sections on gynæcological subjects have been revised by Prof. Barton C. Hirst, and those on the eye and ear by Profs. De Schweinitz and Randall.

NASAL PAPILLOMATA. By Jonathan Wright, M.D. Reprinted from *New York Medical Journal*, December 26, 1891.

In this will be found an excellent bibliography of the subject.

THE OPERATIVE TREATMENT FOR MYO-FIBROMA OF THE UTERUS. By H. J. Boldt, M.D. Reprinted from *American Journal of Obstetrics*. vol. xxvii., No. 6, 1893.

THE DIAGNOSIS OF SOME GYNÆCOLOGICAL DISORDERS. By H. J. Boldt, M.D. Reprinted from *American Medico-Surgical Bulletin*, June, 1893.

The author discusses salpingitis, pelvic hæmatocele, hæmatometra, ovarian cystomata, fibro-myomata, and pelvic abscess.

HABITS OF POSTURE A CAUSE OF DEFORMITY AND DISPLACEMENT OF THE UTERUS. By Eliza M. Mosher, M.D. Reprinted from *New York Journal of Gynæcology and Obstetrics*, November, 1893.

A most valuable paper on the subject of which it treats, and admirably illustrated.

THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA. Seventh decennial revision (1890). Published by the Committee of Revision. Philadelphia: J. B. Lippincott Company. 1893. Pp. 602.

It seems like a work of supererogation to notice this volume, which has obtained such a standing as to make it an essential in every medical library. Perhaps the highest praise that can be meted out to it is to say that, if possible, it is superior to those which have preceded it. The Committee on Revision deserves the gratitude of all branches of the profession for its painstaking and arduous labor.

CHEMISTRY AND PHYSICS. By Joseph Struthers, Ph.B., Columbia College School of Mines, New York; D. W. Ward, Ph.B., Columbia College School of Mines, New York, and Charles H. Willmarth, M.S., New York. (The Students' Quiz Series.) Philadelphia: Lea Brothers & Co. 1893. $1.

In this manual will be found, in the form of question and answer, a condensation of the sciences of chemistry and physics as taught in a general collegiate or medical course. It is designed as an auxiliary to lectures, aiding the student in his study and the teacher in his review work. The experience of the authors has been such as to make them unusually competent to discuss these subjects and to enable them to speak authoritatively on them.

SURGERY. By Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Clinical Lecturer on Surgery, College of Physicians and Surgeons, New York; Visiting Surgeon, Bellevue Hospital, New York; and Charles N. Dixon-Jones, M.D., Assistant Surgeon Out-patient Department, Presbyterian Hospital, New York. Being the final volume of The Students' Quiz Series, edited by Bern B. Gallaudet, M.D. Duodecimo, 291 pages, 149 illustrations. Philadelphia: Lea Brothers & Co. 1893. Cloth, $1.75.

This volume is not to be classed with "compends" or "summaries," but is, on the contrary, an explanation of the principles and practice of surgery in an exceedingly terse style. Its tables group a large amount of information in a very compact and convenient form.

MINOR SURGERY AND BANDAGING. By Henry R. Wharton, M.D., Demonstrator of Surgery in the University of Pennsylvania. In one 12mo volume of 529 pages, with 416 engravings, many being photographic. Philadelphia: Lea Brothers & Co. 1893. Cloth, $3.

The first edition of this practical book has been so well received that a second has become necessary. In it we find all the valuable features of the first and some new features in addition. The aseptic and antiseptic methods of wound treatment have been thoroughly revised.

MANUAL OF PHYSICAL DIAGNOSIS FOR THE USE OF STUDENTS AND PHYSICIANS. By James Tyson, M.D. Second edition, revised and enlarged. Philadelphia: P. Blakiston, Ives & Co. 1893. Pp. 241. Price $1.50.

In this edition we note much that is not to be found in the first, *e.g.*, examination of blood, examination of the more important bacilli associated with the infectious diseases, the various chemical examinations required in diagnosis of diseases of the stomach, and directions for making an autopsy.

THE MICROSCOPE IN PHARMACY. By Joseph H. Hunt, A.M., M.D. Reprinted from *American Druggist and Pharmaceutical Record*.

A plea for the more extended use of the microscope by pharmacists, giving numerous instances illustrative of its value in determining the quality of drugs.

ESSENTIALS OF PRACTICE OF MEDICINE, prepared especially for students of medicine. By Henry Morris, M.D., late Demonstrator Jefferson Medical College, etc. With an Appendix on Examination of Urine by Lawrence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College. Third edition, revised and enlarged by some 300 essential formulæ from the writings of the most eminent anthorities. Collected and arranged by William M. Powell, M.D. Philadelphia: W. B. Saunders. 1894. Pp. 488. Price $2.

That three editions of this work have been called for in three years speaks well for its merits and for the need of its preparation. As an aid to the advanced student in helping him to review in a brief time the subjects upon which his professor has lectured, this manual is admirably adapted, and even the busy physician who has but little time to devote to his treatises may make profitable use of it in refreshing his memory.

MISCELLANEOUS.

FATHERS OF MEDICINE.

Jakob Benignus Winslow was one of the most celebrated anatomists of the foregoing century. He was born April 2, 1669, in Odense, on the Island of Fünen. His first inclination was toward theology, the calling of his father and grandfather, but later, occasioned by his association with a young physician, he inclined toward medicine. With the help of a stipend granted by the King of Denmark, whose protégé he was, he began the study of medicine in 1697 in Holland. In 1698 he went to Paris, where he stayed till 1701, and devoted himself to the study of anatomy under Du Verney, with remarkable predilection. Induced by Bossuet, he embraced Catholicism and, therefore, lost the protection of the King of Denmark. After he had graduated in Paris in 1705, free of expense, he attained through the intercession of his before mentioned teacher, membership in the Académie des Sciènces, and a professorship of anatomy, which he held for many years and had extraordinary success as a teacher and investigator. One of his pupils was Haller.

Under his direction an anatomical theatre (museum) was built and opened in 1745. He died on the 3d of April, 1760, at the age of ninety-one.

Winslow's undying merits lie especially in the domain of topographical anatomy, which he advanced to an extraordinary degree. His name is immortalized in various discoveries (Foramen Winslowii), etc. His principal work is his manual entitled "Exposition Anatomique de la Structure du Corps Humain," in which are recorded the results of his thirty years of study. This illustrious work was published in Paris, 1732, 3 vols.; 1766, 4 vols.; Amsterdam, 1743, 3 vols.; 1754, 4 vols.; Berlin, 1733; London, 1733; Italy (Naples), 1746: in Latin at Frankfurt, 1753; Venice,

1758. Other important works of Winslow, are treatises on the heart, the semilunar valves, the circulation of the blood in the fœtus, etc.,—which were published as essays in the *Mem. de l'Acad. des. sc.* as "Observations sur les Fibres du Cœur et sur les Valvules avec la Manière de le Préparer pour le Démontrer;" "Description d'une Valvule Singuliére de la Veine Cave et Nouveau Sentiment sur de la fameuse Question du trou oval" (Ib. 1717); "Eclaircissements sur la circulation du sang dans le fœtus" (Ib. 1725), and numerous others also published in the *Mem. de l'Acad. des. sc.*, 1711 to 1741—among them essays on anatomy, physiology, and comparative anatomy.

Phillippe Verheyen, of Loewen, Louvain, a celebrated anatomist, was born in Verbrouck in Waïslande on the 23d of April, 1648. He was a peasant until the 22d year of his age. He then first began the study of theology, but inasmuch as he had a leg amputated he found it necessary to give up the study of theology, and turned his mind to medicine.

He was licensed in 1681, and then went to Leyden and became a doctor in Loewen in 1683. In 1689 he was made Professor of Anatomy, and was also nominated to the Chair of Surgery in 1693. His principal works, which contain many new facts, but were not free from great errors, were criticised on all sides and in various ways. They are "Compendia Theoriæ Practicæ in Quartuor Partes Distributi Pars I. et II." (Loewen, 1688); "De Febribus" (Ib., 1692); "Anatomia Corporis Humani" (Ib., 1693); Leipzig, 1699; Brussels, 1710, 4; 1726, 4; Leipzig, 1731; Amsterdam, 1731); "Lettre à un Maître Chirurgien" (Paris, 1698); "Seconde Lettre à un Anatomiste de Grand" (both letters were directed to Palfyn); "Responsio ad Exercitationem Anatomican de Thymo" (Loewen, 1706, 4); "Vera Historia de Horrendo Sanguinis Fluxu ex Oculis, Naribus, Auribus et ore, et Miraculosa Ejusdem Sanatione" (Loewen, 1708). He died January 28, 1710. Although he had a knowledge of the chemical theories of his time, and had, to a certain degree, accepted the ideas of Van Helmont, Descartes, De Le Boe, he knew how to reconcile these theories with the practical observation of the ancients (which he carefully studied) since he devoted himself to the study of anatomy and not merely to physiology, but also to pathology, of which science he was one of the first promoters.

With his exact and methodical spirit, Verheyen devoted himself with predilection to surgery, without, however, neglecting the study and explanation of the internal diseases. However, his works on anatomy and embryology are of greater significance, and his name holds an honorable place in the history of anatomy.

ACTING ASSISTANT SURGEONS.

A BILL

To remove certain disabilities of the late acting assistant surgeons.

Whereas before, during, and since the war of eighteen hundred and sixty-one to eighteen hundred and sixty-five, but chiefly during the war, private physicians were employed as medical officers, serving under the orders of their superior officers as such, agreeably to Army regulations, in the armies of the United States, in addition to the commissioned medical staff, because the number of the latter was not sufficient for the necessities of the service. This class of officers was known officially as acting assistant surgeons, because they performed exactly the same duties, and were subject to the same control as commissioned medical officers. These acting assistant surgeons were employed under contract made in accordance with paragraph twelve hundred and sixty-eight, Revised Regulations of the United States Army, eighteen hundred and sixty-one, and paragraphs thirteen hundred and four and seventy-one, Appendix B, Revised Regulations, eighteen hundred and sixty-three, and were obliged to remain in the service of the United States for a stated time. Among these officers were many of the eminent physicians and surgeons of the United States. Some of the duties performed by acting assistant surgeons were as follows: They were in charge and command of United States military hospitals, known as general, division, field, and post hospitals; they had charge and command of United States military hospitals for the care of contagious diseases; they were in command or in charge of hospital trains, hospital boats, ambulance trains, and were executive officers of United States general hospitals; they acted as brigade and regimental surgeons, and at least one acting assistant surgeon acted as medical director of a department for nearly a year; they were responsible for hospital funds and property; and also post funds; they served on courts-martial, which the Articles of War require shall be composed of officers, and also on boards of survey, in camp, field, and garrison, on overland expeditions, and in Indian wars; they faced death and endured hardships like commissioned officers, and it is known that nearly one hundred and fifty died in the military service of the United States; and

Whereas, these acting assistant surgeons were allowed fuel, rations, quarters, and transportation in kind, and to purchase rations from the commissary, and travelling expenses the same as commissioned medical officers with rank of first lieutenant, and were accorded, by order of the War Department, the same protection in their position, the same respectful subordinate conduct, and the same military courtesy from enlisted men as if they were commissioned officers, because they were placed in the position of commissioned officers so far as related to their duties. Many of them were also required to wear the uniform of an assistant surgeon. Acting assistant surgeons who were disabled by reason of disease contracted or injury received in the military service have been granted pensions under a law which assimilates them to the rank of first lieutenant of the military or Marine Corps; and

Whereas because they were not commissioned as officers, but were employed by contract as such, they are denied admission to military organizations like the Loyal Legion and the Grand Army of the Republic; and to relieve this unjust discrimination, and to give a proper recognition to their patriotism, duties, responsibilities, services, hardships, and exposures, they ought to be entitled to receive the rank for which they are allowed pensions and which will relieve them from these disadvantages. The appended bill is offered for this purpose. It involves no expense to the United States Government and no change in the relative rank of officers of the medical corps of the United States Army who have been or are now in the service of the United States; Therefore,

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That private physicians who were employed as medical officers in the armies of the United States for a period of not less than three months, in accordance with paragraph twelve hundred and sixty-eight of the Revised Regulations, United States Army, eighteen hundred and sixty-one, and paragraphs thirteen hundred and four and seventy-one, Appendix B, Revised Regulations, eighteen hundred and sixty-three, and who were known officially as acting assistant surgeons of the United States Army, and whose services were honorably terminated shall be commissioned by the President of the United States as acting assistant surgeons of the United States Army; and the date of employment as acting assistant surgeons to be the date of commission and muster into service, and the date of the honorable termination of service as acting assistant surgeons to be the date of discharge or muster out of service; *Provided*, That no pay or allowance shall be made to any such acting assistant surgeon by virtue of this act: and this act shall not affect the rank, pay, or emoluments of commissioned medical officers of the United States Army.

THE HEALTH DEPARTMENT OF BROOKLYN SINCE 1866

The Metropolitan Board of Health was organized March 5, under Chapter 74 of the Laws of 1866. The Commissioner representing Kings County, was Jamas Crane, M.D. The law legislating this Board out of existence was passed April 11, 1870.

George Cochran, M. D., was nominated Health Officer in June, 1870.

(See Minutes Common Council, June 27, 1870, Vol. 1., p. 1023.)

(See Minutes Common Council, May 2, 1870, Vol. 1., p. 651.)

Dr. Cochran held the office until his death, November 19, 1872.

Andrew Otterson, M.D., was appointed Health Officer by Mayor Powell, December 2, 1872, and served until May 8, 1873, when, under "an act to establish a Board of Health in and for the City of Brooklyn," passed March 20, 1873, a board organized consisting of James Jourdan, President Board of Police, who was made President of the Board of Health, and John T. Conkling, M.D., and Joseph C. Hutchison, M.D., "Sanitary Members.' Dr. Conkling was elected president, November 24, 1873, vice James Jourdan, resigned.

June 1, 1844, by an act amending the City's charter, the President of the Board of Aldermen, at that time Jacob I. Bergen, and the President of the Board of City Works, at that time Lorin Palmer, were added to the Board.

June 26, 1874, Dr. Conkling was elected President. Daniel D. Briggs, President Board of Police, took the place of James Jourdan, January 1, 1875.

This Board was legislated out of office by Chapter 633, Laws of 1875. This act provided for a new board, which was organized June 28, 1875. It consisted of Andrew Otterson, M. D., President, the President of the Board of Aldermen,—at that time Daniel O'Reilly, Acting President, the President, Jacob I. Bergen being in Europe—and the President of the Board of Police, at that time Daniel D. Briggs.

October 12, 1875, President Bergen returned and assumed his duties as a member of the Board.

January 7, 1876, John French, as President of the Board of Aldermen, took the place of Mr. Bergen.

July 3, 1876, Daniel D. Briggs died.

July 17, 1876, James Jourdan became President of the Board of Police, and a member of the Board of Health.

March 22, 1877, William H. Ray became President of Board of Aldermen and a member of the Board of Health.

June, 1877, James Crane, M.D., succeeded Andrew Otterson, M.D.

January 1, 1878, Francis B. Fisher succeeded Mr. Ray as President of Board of Aldermen.

January 1, 1879, Mr. Ray succeeded Mr. Fisher.

September, 1879, Dr. Otterson succeeded Dr. Crane.

January 1, 1880, Robert Black succeeded Mr. Ray as President of Board of Aldermen.

May 5, 1880, an act was passed (Chapter 377), legislating out of the Board the Presidents of the Boards of Police and Aldermen, and providing for a single head of the Health Department under the title of Health Commissioner, to be appointed by Mayor and Comptroller. Under this act James Crane, M.D., was appointed June 17, 1880.

This same act provided that after January 1, 1882, the heads of departments should be appointed by the Mayor alone.

February 1, 1882, Joseph H. Raymond, M.D., was appointed Health Commissioner by Mayor Low, and was reappointed by Mr. Low, February 1, 1884.

February 1, 1886, Andrew Otterson, M.D., was appointed by Mayor Whitney.

February 1, 1888, John Griffin, M.D., was appointed by Mayor Chapin, and again by the same Mayor, February 1, 1890. February 1, 1892, he was appointed for his third term by Mayor Boody.

February 1, 1894, Z. Taylor Emery, M.D., was appointed by Mayor Schieren.

[We shall be glad to have any additions, corrections or omissions in the above sent to us.—Ed.]

SOME SANITARY ASPECTS OF BREAD MAKING.

In the "Doctor of Hygiene," Dr. Cyrus Edson, Health Commissioner of New York, discusses this subject: he says that it is necessary, if one would understand the sanitary aspects of bread making, to fully comprehend the present theory held by scientists of germs and the part played by them in disease. When a germ is introduced into the blood or tissues of the body, its action appears to be analogous to that which takes place when yeast is added to dough. It attacks certain elements of the blood or tissues, and destroys them, at the same time producing new substances. After yeast has fermented a "batch" of dough, it can never again effect fermentation in that same batch, because it has exhausted or destroyed the material necessary to its action. So it is also with certain germs, as those of smallpox for example. After they have once worked in a human body they can never again affect the same body. This rule has very few exceptions.

But the germs of the greater part of the germ diseases will develop or increase in number without being in the body of a human being, provided always you give them the proper conditions. These conditions are to be found in dough which is being raised with yeast. They are warmth, moisture and the organic matter of the flour on which the germs, after certain changes, feed.

Yeast is germ growth, and when introduced into a mixture of glucose or starch in the presence of warmth and moisture sets up a fermentation. If the mixture be a starchy dough the yeast first changes a portion of the starch into glucose and then decomposes the glucose by changing it into carbonic acid gas and alcohol.

The gluten affords an excellent nidus for the development of germs of disease as well as for the yeast germs. The germs of cholera, as of typhoid fever, would, *if introduced* into dough, find very favorable conditions for their growth.

Dr. Edson does not wish to "pose" as an alarmist, nor is he willing to say there is very much chance of the germs of typhus and of cholera reaching the stomachs of the people who eat bread which has been raised with yeast. Their safety is due to two facts, first, that the germs would be killed were the bread throughly cooked; second, because the germs of these diseases are too carefully looked after to make it probable that they would find their way into the dough. But while he is not afraid that cholera and typhus will be greatly spread by yeast-raised bread, he has not the slightest cause to doubt that other diseases have been and will be carried about in the bread.

He has met journeymen bakers, suffering from cutaneous diseases, working the dough for a long time in the bread trough with naked hands and arms. This is an exceedingly objectionable thing from the standpoint of a physician, and for these reasons: While it needs no medical knowledge to cause a person to object to having the bread they eat kneaded by a baker having cutaneous sores on his arms or hands, it does need this knowledge to know that the germs of disease which are in the air and dust and on stairways and straps in street cars, are most often collected on the hands. So well do physicians know this that there is no ablution practical equal to that which they undergo before they perform any kind of surgical operation. Any person who has ever kneaded dough understands the way in which the dough cleans the hands. In other words, this means that any germs which may have found a lodging place on the hands of the baker before he makes up his batch of bread are sure to find their way into the dough, and once there, to find all the conditions necessary for subdivision and growth. This is equivalent to saying that we must rely on heat to kill these germs, because it is almost certain that they will be there. Now, underdone or doughy bread is a form which every man and woman has seen.

He has not the slightest doubt that could we trace back some of the cases of illness which we meet in our practice we would find that germs collected by the baker have found their way into the yeast bread, that the heat has not been sufficient to destroy them, that the uncooked yeast bread has been eaten and with it the colonies of germs, that they have found their way into the blood and that the call for our services which followed has rounded off this sequence of events.

The longer any substance to be eaten is exposed to the air, the greater the chance that germs will be deposited on it. Bread raised with yeast is worked down or kneaded twice before being baked, and this process may take anywhere from four hours to ten. It has, then, the chance of collecting disease germs during this process of raising, and it has two periods of working down or kneading during each of which it may gather the dirt containing the germs from the baker's hands or feet. As no bread save that raised with yeast, goes through this long process of raising and kneading, so no bread save that raised with yeast has so good a chance of gathering germs. And in this connection the value of toasting the bread must be pointed out. In thin slices the heat is more apt to penetrate it and kill what germs it may have living in it.

The evils which attend the yeast-made bread are obviated by the use of a properly made, pure and wholesome baking powder in lieu of yeast. Baking powders are composed of an acid and an alkali, which if properly combined, should when they unite at once destroy themselves and produce carbonic acid gas. More than that, they should be made in such fashion as to be very fine powders, so that when thoroughly mixed with the flour there will be only a very small bubble of gas created in any one place. A good baking powder does its work while the loaf is in the oven, and having done it, disappears.

Powders containing alum, or those which are compounded from impure ingredients, or those which are not combined in proper proportion or carefully mixed, and which will leave either an acid or an alkali in the bread, must not be used.

The materials used in a good baking powder, viz., cream of tartar and soda, are perfectly harmless even when eaten. But they are combined in exact compensating weights so that when chemical action begins between them they practically disappear, the substance of both having been taken up to form the carbonic acid gas. More than this, the proper method of using the powder insures the most thorough mixing with the flour. The proper quantity being taken, it is mixed with the flour and stirred round in it. The mixture is then sifted several times, and this insures that in every part of the flour there shall be a few particles of the powder. The salt and milk and water being added, the dough is made up as quickly as possible and moulded into the loaves.

These are placed in the oven and baked. But the very moment the warmth and moisture attack the mixture of cream of tartar and soda, these two ingredients chemically combine and carbonic acid or leavening gas is evolved. The consequence may be seen at a glance, the bread is raised during the time it is baking in the oven, and this is the most perfect of all conceivable methods of raising it.

Here, then, there is no chance for germs of disease to get into the dough and thence into the stomach, more than that the bread is necessarily as sweet as possible, there having been no time during which it could sour. This involves the fact that the bread so made will keep longer, as it is less likely to be contaminated by the germs that affect the souring process.

Secretiora Naturæ mysteria Temporis auxilio detegit Anatomia

MAGENDIE.

THE

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DAVID MYERLE, M.D., WM. BROWNING, M.D.

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ORIGINAL ARTICLES.

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METHODS OF DRAINAGE, WITH SOME REMARKS ON A NEW ASEPTIC DRAINAGE TUBE.

BY JOEL W. HYDE, M.D.,

Consulting Obstetrician to the Long Island College Hospital; Obstetric Surgeon to St. Mary's Hospital; Member of the Brooklyn Gynæcological Society.

Read before the Brooklyn Gynæological Society, December 1, 1893.

Ever since drainage of the abdominal cavity was first proposed as a safeguard against septic troubles or hæmorrhage, there has been constant experimenting to find the best means to accomplish this result, and many ingenious devices have been submitted to the profession for approval.

With the exception of Miculicz's method of drainage by iodoform or sublimate gauze, which method is still in vogue to some extent, all others seem to have been abandoned, practically, for the glass tube. This is probably because it is one single glass piece, perfectly smooth, and the most easily rendered aseptic.

Any method by which the fluids likely to be found in the abdominal cavity after operation can be brought to the surface, is drainage, and good as far as it goes, but all are found to be faulty in one respect or another.

A strip of gauze may not irritate the peritoneal coat, but one cannot be assured that it remains in situ fifteen minutes after the wound is closed; it may be anywhere except where needed, in the bottom of the wound. I know from observation that intestinal peristalsis will carry free bodies to a considerable distance. Rubber tubing or any soft, flexible material is no better. Nor are the drainage tubes made from animal tissues, which soften down, collapse or are absorbed, any better. In each instance the very object for which they are placed there is defeated.

For this reason the drainage tube must be of some firm material, hard rubber, aluminum or glass, of such make and shape that no doubt can be entertained as to its position in the wound, and the general concensus of surgical opinion is that glass is preferable.

There are few wounds of the abdomen where there is not necessity for some early drainage. This is what Miculicz was striving to attain when he devised the aseptic gauze drainage, viz., continuous and immediate drainage from the start. It has been successful to a considerable degree, as any idea based on natural law would be, but it is crude and unfinished. Why do we use gauze? Simply because it is porous. When the gauze becomes charged with albuminous matter, its interstitial capillarity is destroyed. It becomes practically a solid seton.

Objection is made to the glass tube that it is easily clogged up or that it becomes encapsulated. There could be no encapsulation unless there was a coagulum. There would be no coagulum unless there was accumulation of fluid. There would be no accumulation of fluid with a proper and successful drainage.

Furthermore, I believe with Gerster that "if the fluid is absorbed, or artificially removed by drainage *before* the cocci have a chance to vastly multiply, no peritonitis or only adhesive forms of the inflammation will develop." Thus, the fact stands out, that with a clean wound to begin with, and kept clean after the operation by a successful drainage, we have nothing to fear from sepsis.

Drainage removes the pabulum of infection. Even if pathogenic microbes should, in limited numbers, gain access to the peritoneal surface, the danger would be slight, provided there were no accumulation of any material which might serve as a culture medium.

Grawitz has shown, by experiments, proof of the fact that "the normal peritoneum will at once absorb into the circulation moderate quantities of active pyogenic cocci, where they will be widely scattered through the blood and perish."

There is no doubt but that the peritoneal surfaces can safely absorb, at times, a certain amount of fluids, whether it be blood, serum or pus, if laudable. Regarding this fact, Prof. Munde reasons thus, [1] "The difference between the fluid-pressure in the intestines and the general arterial and lymphatic system on the one hand, and the free peritoneal cavity on the other hand, no doubt greatly influences this absorption."

Again, Gerster says, [2] "The presence in the peritoneal cavity of a larger quantity of stagnant bloody serum than can be readily absorbed within an hour, will suffice to produce purulent peritonitis on the addition of a very small number of cocci."

The limit when this absorption could continue to take place, would often mark a very critical moment for the patient. The putrefactive process works rapidly ; the abdomen becomes greatly distended ; intestinal paralysis impends, and a safe and thoroughly antiseptic drainage is imperative.

I do not ignore the fact that some of our most successful operators are very emphatic in their condemnation of our germ theory and the technique based upon it. But I observe these men are, by nature and training, exceptionally tidy men. They succeed because of their clean work. They reject the various methods of drainage in vogue, because they can really make their work cleaner without any of these—that is, in most cases. But the most brilliant of tidy surgeons cannot, in every case, close up the abdomen and feel secure of the result. What about atheromatous blood-vessels, on which no ligature can be a guaranty of safety? What about disseminated pus? If the surgeon rejects drainage in such emergencies, it is simply because he lacks faith in all the known appliances.

A great variety of opinions exist among the leading laparotomists of the world as to the necessity of drainage, or in what class of cases it is admissible.

Some who have used drainage in one or another form have had unexpected mortality, while others have had wonderful success.

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[1] Am. Gynecol. Trans., vol. xii., pp. 157.

[2] Antisep. Surg., pp. 120.

This result can hardly be ascribed to drainage; something undoubtedly belongs to the surgeon himself. But without regard to the personality of the operator, whether drainage has offered more of success or failure in certain cases, the law of cleanliness stands, and even those who throw aside the drainage tube with an air of indifference will unite with those who laud its use, in saying, the cleaner the wound, the safer the patient.

It is little wonder that drainage has often failed, for it has rarely been applied under conditions inviting a full measure of success. The most that can be said of it, is that it has been trusted to the law of capillary attraction. If the tube happened to be located so that it did not become occluded by intestinal or other tissue, or encapsulated so that any fluid present could not reach its distal extremity, we admit it has often done valuable service, and vice versa, it has been simply a foreign body in the wound.

It is surprising often, how a small quantity of confined pus can create alarming constitutional disturbances, and, again, how rapidly these disturbances are dissipated immediately the pus is brought to the surface. There is no part of the human body, unless it be the brain, where an accumulation of pus or serum is more dangerous than in the abdominal cavity. There is hardly any operation in these days, however simple, that does not deserve and receive a full degree of cleanliness and aseptic treatment. Abdominal section should be no exception to the rule, but rather it should have the attention commensurate with its gravity, which means in many cases the highest art and science in methods of drainage.

Internal hæmorrhage after the removal of tumors of the abdomen is sufficiently frequent to make it dangerous to ever close the wound without a drainage tube. Goodell, Wylie and others are witnesses to this fact.

[1] Dr. Thomas A. Ashby has, in a very convincing way, stated the case: "It is a fact that in our supreme regard for original work and for original ideas and methods, we are inclined to overlook the consideration of minor and ordinary clinical conditions, which bear very important relations to the results of our work.

"In those cases in which I employed drainage, even after simple procedures, I have been impressed with the fact that in from twenty-four to forty-eight hours after the operation, decided evidences of slight intra-pelvic bleeding were recognized in the discharge from the tube.

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[1] Am. Gynecol. Trans., 1890.

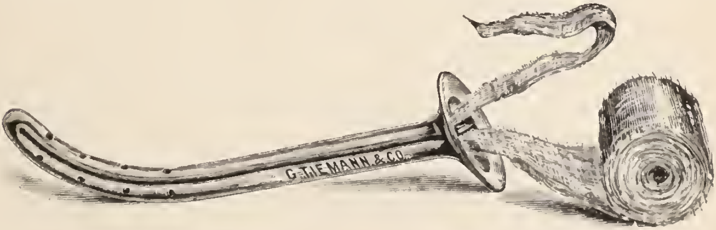
"Inflammatory exudates were cautiously withdrawn through the tube, thus relieving the peritoneal membrane of the presence of material capable of generating sepsis or promoting inflammatory results. By the process of drainage no material is left for absorption, for decomposition, or for pus formation. To repeat, the temperature is lower, the circulation more quiet, and the general condition of the patient is improved."

Of what use are all the excessive antiseptic precautions as to the room, the instruments, the operating staff, and the patient, if the wound is to be closed upon a mass of debris which is more than liable to defeat all our hopes of success?

The tables of mortality for cœliotomies indicate a gradual decrease in the death-rate for the past decade, until now it is a very small percentage: this with our present best knowledge of drainage. This percentage could be still considerably reduced under a system of more perfect drainage.

During the past year I have been using a new drainage tube, devised and perfected by myself, with the assistance of Messrs. Tiemann & Co., instrument makers, of New York. Its workings have been so satisfactory in every instance, that I have been induced, in a spirit of modesty, to offer it to the profession. Iodoform or sublimate absorbents can be freely used with it, yet never come in contact with any of the abdominal tissues to produce irritant or toxic effects. It seems to possess a higher absorbent power of fluids than other means of drainage known, and its presence in the wound and abdomen seems to be less harmful.

I respectfully submit with my paper a drawing of this new drainage tube, with an explanation of its make and use.


G. TIEMANN & CO.

NOTE.—This cut represents the new aseptic drainage tube, much reduced in size, with a roll of gauze being in use, instead of the wicking. The gauze is from an inch and a quarter to an inch and a half in width, according to the size of the tube being used; it has also the advantage of being more readily obtained in an emergency.

This drainage tube consists of a double glass cannula, curved to fit the wound, and the locality of the operation. It has four eyelet holes on either side for any pus or exudate to enter. It has a continuous and uniform calibre throughout its course, through which the sterilized and absorbent wicking is drawn, several inches at necessary intervals, thus pumping out all deleterious matter and keeping the wound dry and clean.

The wicking is boiled for two hours in water, then dried and placed in ether. It is then put in a hot biniodide solution, or it may be sterilized after boiling in water, by an ether and iodoform mixture. It is then dried between layers of aseptic cheese-cloth and wound on spools. which are also equally protected. The spools are placed in aseptic boxes, with a rubber tube attachment to each, through which the aseptic wicking is conveyed to the drainage tube. This connecting tube is about fifteen inches long, to allow the spool to lie by the side of the patient in bed. A double fold of iodoform gauze can be used in place of a rubber tubing to protect the wicking.

Many surgeons prefer to have their surgical dressings made under their own supervision. It is necessary to have a few extra spools of wicking prepared for emergencies, and the cannula can always be easily threaded by first tying a shot to a piece of stout silk and passing this through the cannula, and afterwards attaching the silk to the wicking.

Experiments have been made by immersing one of these drainage tubes in a measuring glass containing two ounces of water, with a wicking twelve yards long drawn slowly through the tube. The water was entirely exhausted.

With a thin starch fluid, of the consistence of pus, the exhaustion was even more rapid.

Experiments with blood serum showed the absorption to be fully as rapid as those experiments where water was used.

Two ounces of warm water was placed in a pint bowl, in which twelve yards of aseptic wicking was immersed, and it promptly absorbed it all. The same was true when serum or thin starch was substituted for water. Thus, I learned that it was possible to gauge the absorbing power, and the amount of liquid drawn from a cavity.

Kœberle gave us the glass tube ; Miculicz has demonstrated the value of a capillary drain ; Hunter Robb introduces the gauze of Miculicz into Kœberle's tube. But the open mouth of Kœberle's cylindrical tube is too much like an old-fashioned wad-punch, and it may be held responsible for several cases of intestinal perforation. The capillary drain, with or without Kœberle's tube, loses its capillarity when its meshes become clotted with organic matter. The arrangement herewith submitted will not punch anything; its capillary mechanism is always fresh and clean, and on occasion it will perform its functions, with a high grade of satisfaction to the surgeon,

Sims formely used a double glass drainage (two separate glass tubes, the efferrent being the larger), for flushing purposes. But this idea of flushing out the abdominal cavity as a part of the after-treatment of abdominal section has become nearly obsolete, on account of the danger of disturbing any new adhesions.

RECAPITULATION.

1. It is narrower than the usual drainage tube, and it conforms to the line of incision.
2. It is impossible for the tissues to clog the openings and thus defeat its intended purpose.
3. It forms a complete pump, which removes all pus, blood, or serum.
4. It is absolutely aseptic.
5. It can be safely entrusted to any intelligent nurse without danger to the patient.
6. The surgeon can always know what is going on at the bottom of the wound.
7. It is very light and strong.
8. There is no danger of fœcal fistulæ resulting from its use.

DISCUSSION.

Dr. Chase: Mr. President, while it is doubtless true that the need for frequent abdominal drainage is not as great as it was formerly, as the science of aseptic surgery is becoming better understood, the fact however remains that drainage must be instituted in a certain number of cases, and I can conceive of nothing better adapted to the ends desired than this device of Dr. Hyde's; apparently it fulfils the indications exactly. It seems to me, sir, that the flattening of the tube, as he suggests, so that it shall maintain its position in the incision, is a point of great value. I have never seen this demonstrated, but theoretically it seems to fulfil every indication, and those who have used it speak in the highest terms of its efficiency. Possibly somebody some day will devise something better for the purpose for which this is intended, but I fancy we will wait some time before we find any improvement on this instrument.

Dr. McNaughton: I merely wish to congratulate Dr. Hyde. I think this is a very excellent arrangement, and I cannot see why it will fail in doing what he expects of it. As Dr Chase said, the use of the drainage tube is becoming less and less and with improved methods of operating and of stopping the bleeding points, the necessity for drainage is constantly becoming less. The objection to glass or any stiff drainage tube is not on account of the intestines so much, as the liability of causing ulceration at the point where it rests, and it is supposed to rest in the cul-de-sac. I have noticed in removing iodoform gauze from the peritoneal cavity, that it requires but a very few hours for adhesions to form around the gauze and it causes pain when removed. It has seemed to me if we could devise some method of relieving the patient of that additional shock it would be a good thing, and I think this arrangement will, to a considerable extent do so. I again congratulate Dr. Hyde.

Another objection to the glass drainage tube is the difficulty of keeping it perfectly clean; at the outer extremity you have to use some aseptic dressing. Is it the purpose of Dr. Hyde to do that here?

Dr. Hyde: I simply pass it through a piece of rubber gauze, which encloses the box containing the strip of antiseptic gauze, and which is generally about twelve yards long. Then I go on and complete the suturing and dressing of the wound; and place a dressing of iodoform, cotton or anything I choose, over the abdomen, allowing the rubber then to unfold and lay over the whole, so that the opening of the tube is above everything else; over that I simply throw a little iodoform gauze, and so far as the binder is concerned, I put one on, making an opening in it just admitting this tube, so that nothing at all is touched in the whole dressing, while that tube remains in situ.

Dr. McNaughton: It seems to me this tube can be used to advantage in washing out extra-peritoneal pus cavities, of course without gauze.

Dr. Raymond: Would there be any advantage if the box containing the gauze could be rendered aseptic, say a metal box?

Dr. Hyde: The boxes are made as carefully as possible and are themselves made as aseptic as possible before the gauze is put into them, then the gauze is placed in wax paper and does not come in contact with the box at all. That is something that probably will be thought of later.

Dr. Chase: Cannot that box be put into a sterilizer as it is?

Dr. Hyde: You may put it in dry heat.

Dr. Kortright: Are these tubes made in different sizes?

Dr. Hyde: Yes, they are made in various sizes.

Dr. Emery: I think this would be a very excellent instrument to wash out the bladder. The improvement I would suggest, if it can be made,—and I have not hit upon it,—is to make it so it turns on not so sharp an angle where the gauze will not catch as you pull it round. I do not know how that can be accomplished, but perhaps it might be made with more of a curve or bulb at the end. I am going to possess myself of one of these instruments and use it in the bladder.

Dr. Raymond : Are these tubes difficult to make?

Dr. Hyde : I tried one or two makers and they utterly failed. Tiemann found a German expert in glass work and he has succeeded admirably.

Dr. Jewett : The instrument is a very ingenious drainage tube, but I had supposed that the drainage tube was not as extensively used as formerly. I would like to ask Dr. Raymond and Dr. McNaughton how often Dr. Skene uses drainage; whether his practice is not very different in that particular from what it was ten or fifteen years ago; is it done in his practice except where pus or necrotic material cannot be all removed?

Dr. Raymond : I would say it is the great exception.

Dr. McNaughton : I think he has had only two cases in a year where drainage has been found necessary.

Dr. Jewett : Will Dr. Hyde tell us in his closing remarks, how frequently he uses the drainage tube. I understand he sometimes relies on other measures, depending on the power of the peritoneum to take care of very small quantities of septic material, and also trusting to the help of intestinal drainage by catharsis.

There is always the risk with a tube that infection may go down alongside the tube from the skin.

Dr. Hyde : Mr. President, it is possible that I have imparted a wrong impression by reading my paper: you may think that I am a constant advocate of drainage in every cœliotomy. I wish to state with much emphasis that this is not the case. I am not in favor of drainage in anything like a majority of cases. I believe that an immense amount of harm can be done by the indiscriminate use of drainage tubes, necessary or not necessary. I know some men who drain in every instance, thinking it unwise to close the cavity without drainage; and there are others who never drain. There is a medium between the two. I believe that there are cases where you *must* drain, and it is for such cases that I have devised this tube. I suppose I may say that in my last ten laparotomies I have not used a drainage tube but twice, so that would show you about how I consider the use of the drainage tube; but I have never used this drainage tube without the greatest possible satisfaction. I do not know how any other method of drainage could work so admirably as this and give one so constant a knowledge of what is going on at the bottom of the wound. Suppose that you have a gauze packing at the bottom of a wound; that remains there until you are ready to take it entirely away, that is, whatever you may be drawing out, the bottom packing remains there, and is a serious irritant; it is more than an absorbent and it does not absorb one moment after its meshes are full: It is really nothing but a solid foreign body there to irritate.

I do not know what experience some of the gentlemen here have had with iodoform poisoning, but I have had some experience with it and I do not like it. There are certain patients who have that peculiar idiosyncrasy, that you cannot use iodoform about them without their experiencing discomfort from it, such as fainting, headache and other very grave toxic effects. If you use iodoform gauze with this tube, it never comes in contact with the patient ; no part of the body is ever touched by it, not the skin, nor the bottom of the wound, nor any part of the body, so it is pretty clear that it must be a wonderously sensitive patient that could feel any toxic effect, of ever so mild a character, from the use of iodoform in this way : you my say the same of the bichloride or biniodide used in the abdominal cavity. I believe now that surgeons are beginning to discard, almost entirely, these powerful antiseptics in intra-peritoneal work. Whatever they may do to their instruments or hands, and all outside of the patient, for the purpose of rendering them aseptic, they are very careful that nothing but absolute hot water shall touch the inside of the patient. If you desire either a bichloride or an iodoform gauze for possibly greater safety, you can use it here and not have it come in contact for a moment with the interior of the cavity.

In regard to the manufacture of this tube, the point that Dr. Emery spoke of had been discussed by the instrument maker and myself, but as the calibre of each of the tubes has to be equal all the way around it is impossible to turn that short curve there, and make that less sharp, unless you enlarge the end of the instrument, which would make it exceedingly awkward to pull out of the cavity, and you might have to do some cutting.

Dr. McNaughton : In your experiments did you try candle wicking ?

Dr. Hyde : Yes, that was my first experiment ; candle wicking boiled for some time, and then put into a weak solution of iodoform. It acted very nicely. I was surprised to see how well I could exhaust water from a measuring glass, almost as if using a pump.

Dr. Chase: I suppose in his experiments the Doctor has been able to demonstrate just what the capillary attractive power of any particular substance is. If that was introduced into a tumbler and allowed to remain, when the meshes become full of the fluid does the capillary power cease?

Dr. Hyde: It does not.

Dr. Chase: Then it will to a certain degree empty the conents of the cavity without moving the gauze in the tube?

Dr. Hyde: It makes quite a difference whether you have water or whether you have an organic substance there. As soon as the meshes of the gauze are laden with an organic substance, its ability to suck up or draw off is practically nullified; but if you put it in water, or hang it over the side of a glass of water, it will very quickly draw off the water, and you will find it on the floor.

While speaking of that, if any of you happen to use this tube sometime, remember that if it is put into blood, or serum, or pus, and allowed to remain there neglected, the capillary attraction will draw the fluid up in both the afferent and efferent tubes alike. As you do not care to have the fluid absorbed into the spool that you are using, the nurse is instructed to be constantly watching this, every hour or two, and draw out a few inches of the gauze very slowly, being very careful not to disturb the point of the tube in the wound.

This tube could never become encapsulated by a mass of adhesions, as in the case of a wedge of gauze, packed in solidly at the bottom of the wound and allowed to remain there three to five days undisturbed, as it sometimes is. I can understand how that might be almost covered up by adhesions. I have taken this tube out four or five days after a cœliotomy with the greatest of ease, and the patient did not know when it was removed. I think that, of itself almost speaks for the tube. The difference between this new drainage tube as compared with the old round glass tube is wonderful. The latter is bound to leave a bad opening in the abdominal walls that will take sometimes weeks to heal, and is dangerous to leave. I place a deep suture at the locality where the tube is inserted, but do not tie it, until the tube is removed.

I have sometimes moved it slightly to find out if it is held or bound down, but it has always been readily movable.

The tubes are made in all sizes, and further than that, besides being used for bladder irrigation, they are used for paracentesis thoracis. The instrument maker will make them for any cavity that is to be drained, either the thoracic or the abdominal.

RECTO-COLONIC ALIMENTATION.

BY E. A. DAY, M.D.

Read before the Medical Society of the County of Kings, Nov. 21, 1893.

Within the past few years the "Healing Art" has been so greatly enriched by the discovery of many valuable therapeutic agents, and chemistry has so transformed the crude drugs of our forefathers into the more elegant and more efficient forms now in existence, that, with the potent agents at our service, it would seem almost culpable for the modern physician to allow any of his patients to die. Nevertheless, practitioners who have had sufficient experience to have lost that overweening confidence in Materia Medica which takes possession of every youthful Æsculapian, frequently feel impelled to turn from the art of medication to the science of nutrition. Indeed it may be truthfully said that the tendency of the age is from physic toward food.

Although much advancement has been made in the methods of feeding the sick, the subject yet receives far too little attention in our medical colleges and is gravely neglected by most of our training schools for nurses. Thus doctors and nurses alike are too often ignorant and inefficient in this all-important matter. It cannot be but that, in the near future, the cooking class will have a place in every training school for nurses and the science of nutrition a professorship in every medical college.

In maladies known to be of brief duration and moderate severity, in an ordinarily healthy person, it is not usually difficult to keep the digestive organs in a favorable condition for appropriating sufficient food. In fact, there are many cases of acute gastric and intestinal disorders in which it is excellent treatment to withhold food for a time. In all diseases of severe or protracted character, however, as diphtheria or typhoid fever, in which the vital powers are often violently assaulted or subjected to a prolonged siege and the resisting forces weakened by the disabled condition of the reinforcing digestive organs, the problem of nourishment becomes paramount at once, and those physicians who fail to meet the emergency promptly, pursuing, rather, the expectant plan, are the ones who consign their patients to the care of the Fates.

Turning more directly to the subject, we note that there are but three recognized avenues by which nutriment may enter the system in appreciable quantities: namely, the skin, the stomach and the rectum.

In extreme cases of inanition it has seemed to me that material advantage has been gained by anointing the skin throughout with cocoa butter, cod-liver oil or other unguent. Whether the improved condition was due to the absorption of a portion of the material applied to the skin or to the emollient effect of the oil, together with the beneficial effect of the incidental massage, is uncertain. Probably to each should be given a share of credit.

Considering now the difficulties met in the administration of food by the stomach we encounter the insane, the insensible and comatose, and the subjects of diphtheritic paralysis of the muscles of deglutition. Happily these cases can usually be readily nourished by the introduction of liquid food into the œsophagus by means of a soft rubber tube passed through the nasal orifice. In other non-febrile conditions, such as gastric ulcer, acute and chronic catarrh, vomiting from reflex uterine and ovarian disturbances, including vomiting of pregnancy, the physician not infrequently finds his efforts to sustain his patient by the exhibition of nutriment to the stomach unavailing.

It is, however, in that great class of diseases characterized by fever that we encounter the most frequent, if not the most trying, problems pertaining to nourishment. Here we recognize the following conditions, which are so at variance with one another as to tax the wisest judgment and greatest skill :

1st. In all febrile disorders there is an increased destruction and waste of the tissues of the body, alarming in proportion to the violence and probable duration of the fever. Hence there arises, at once, a necessity for an increased supply of food.

2d. Associated with high temperature there is also a morbid condition of the salivary, peptic, pancreatic and intestinal glands whose function is to produce the various digestive fluids and ferments. Thus the digestive processes are enfeebled or suspended.

3d. At the same time pyrexia often so interferes with the assimilative functions as to hinder the appropriation of nutriment.

4th. The emunctories, while as seriously affected by fever as other organs, are, at the same time, called upon to perform the unusual task of eliminating the increased tissue waste already mentioned, as well as to dispose of food which the impaired digestive and assimilative organs are unable to utilize and which remains and decomposes in the stomach and intestines.

5th. The increased tissue waste, together with the extreme difficulty if not impossibility of adapting the food introduced into the stomach to its altered condition in the diseased organism, results in a surcharging of the system with effete matter.

6th. The accumulation of tissue waste and of undigested and decomposing food matter tends both to exaggerate the fever and to produce an unconquerable disgust for food, which is vomited if administered.

Thus is completed a vicious circle whose round many a patient continues to travel until death ends the course.

A generation since, physicians refrained from administering food to the fevered patient because of a conviction, based upon clinical observation, that such a course tended to increase fever. Indeed it is not now sufficiently well recognized that the careless exhibition of food, faulty in kind or quantity, is most harmful in its effects upon febrile patients. How often are retrograde movements of patients attributed to relapses of disease when in truth they are due to the derangement or poisoning of the system by injudicious feeding.

The modern physician recognizes the necessity of a liberal administration of nourishment during the course of febrile diseases in order to compensate for the destruction of tissues and to maintain the bodily strength of the patient that he may successfully meet and pass the climax of his disease. Despite the difficulties which we have seen are involved in the accomplishment of this result, our more careful and skilful physicians are attacking the problem with increasing confidence and success. Nevertheless. it must be admitted that too often patients die—not for the want of proper medication, but from the need of sustenance. the difficulties we have mentioned often effectually debarring the administration of food by the stomach.

From the foregoing consideration it will appear—

1st. That probably a sufficient amount of nutriment can be introduced through the integument to serve as an adjunct of some value in the management of desperate cases, but not enough to be relied upon of itself ;

2d. That by the ordinary or even the most skilful methods of stomach feeding many cases are lost because the deranged condition of the stomach forbids the digestion and absorption of sufficient aliment to maintain the vital powers through the crisis of the disease ;

3d. That in no inconsiderable number of cases the stomach practically or absolutely ceases to be an avenue through which food may enter the system.

Thus we come somewhat circuitously perhaps, but, logically to the immediate consideration of our subject, "Rectal Feeding."

The literature on this method of sustaining life is exceedingly meagre, and such as exists tends, in the main, to discourage the use of the expedient in any but the most desperate and hopeless cases. As an instance of this there are found at the close of an extremely interesting and instructive article on "Nutrition and Foods," by Prof. I. Burney Yeo, a few paragraphs devoted to the subject claiming our attention. From this source are taken the following statements :

"According to Bauer's observations, under no circumstances can more than a fourth part of the amount of nourishment necessary for subsistence be absorbed in the rectum from nutrient enemata. Its capacity is limited and the absorption of nutrient matters exceedingly slow."

"Luebe has pointed out the importance, if nutrient enemata are to be used for any length of time, of employing substances that cannot cause the least irritation of the mucous membrane of the rectum and that can be prepared without any great difficulty. He has suggested enemata of meat and pancreas made in the following manner: Mince fine from 150 to 300 grammes of meat and mix with from 50 to 100 grammes of finely chopped pancreas, free from fat. Beat the mixture into paste with a pestle or spoon, adding a little lukewarm water to make it of a suitable consistency for injection through the enema tube. Use warm ; if cold it may excite the rectum and cause expulsion. If thought desirable, from 25 to 50 grammes of fat may be intimately mixed with the mass by the help of a warmed pestle. A syringe with a wide nozzle must be used. Such enemata cause no irritation of the mucous membrane of the rectum and can be retained from twelve to thirty-six hours."

"It is advisable to wash out the rectum with pure water an hour before administering a nutrient enema. Only a small quantity should be administered at a time—from one to three ounces ; a large quantity is liable to be rejected. The tube should be well oiled to avoid setting up soreness or irritation. The addition of opium may insure retention, but may also retard absorption."

"We have seen that it is impossible to maintain life for any length of time simply by rectal alimentation. If we have to trust to this alone we can only avert death from starvation for a brief time, probably for two or three weeks. Not only is the amount of nutriment that can be absorbed by the rectum insufficient for the maintenance of life, but diarrhœa is extremely liable to set in after a time, so that the rectal injections are no longer retained."

These quotations constitute fully one half of the article from which they are taken and are characterized by the discouraging tenor of all writings upon the subject. The hopelessness of sustaining life for any length of time is always made apparent; the difficulty of administering the enemata without causing irritation of the bowel and rejection of the injected material is never obscured. Luebe's preparation, referred to by this author, and which is a general favorite among writers on this subject, is apparently a crude method of obtaining peptones and does not impress one as meeting well the conditions imposed by its originator. The preparation of this mixture for continuous use in any place remote from the city would be an impossibility, and its preparation in the city cannot by any means be said to be unattended with difficulty. Moreover to compound such a paste from meat and pancreas purchased at an ordinary meat shop, macerating it in warm water and pulverizing with a warm pestle, then introducing the mass into the rectum and allowing it to remain for from twelve to thirty-six hours, would, without doubt, create a veritable Bonanza for the bacteriologist, but quite the opposite for any patient possessing an ordinarily resentful rectum.

As already remarked the literature on the subject of rectal alimentation is most limited. A search through the library of the New York Academy of Medicine, with the aid of the Index Medicus, brought to light but three or four references to the matter, though undoubtedly the practice of rectal feeding is more prevalent than the literature upon the subject. Dr. Edwin Ricketts, of Cincinnati, relates the case of a young man whom he sustained for six weeks by the daily administration of five to ten ounces of defibrinated beef blood obtained fresh every day from a slaughter-house near by. The Doctor states that this procedure is manifestly impracticable in cases less favorably situated for procuring a supply of recently drawn blood.

In view of the difficulties which seem to surround the practice of rectal feeding, the writer's experience may be of interest.

In June, 1891, there was under my care a woman, thirty-six years of age, who from the birth of her first child eighteen years previous had suffered almost continuously from uterine and ovarian disorders. She had twice undergone operations for repair of cervix and perineum. At the time this sketch introduces her she was extremely weak and emaciated and suffering excruciatingly from headache, low backache and ovarian pain, as well as from violent paroxysms of vomiting apparently due to reflex ovarian disturbances. Finally the stomach refused to tolerate either medicine, food or drink. Even bits of cracked ice were rejected. Efforts to sustain the patient by nutrient enemata of the various substances ordinarily used for the purpose were unavailing, because of the like irritable condition of the rectum. Sleep was unattainable and in a few days the patient was in a hopeless condition. Her children were recalled from the country that she might see them before her death and some preparations were made in anticipation of her burial. Emaciation was most marked. In this extremity occurred the thought of using peptones by the rectum, and a trial was at once instituted. Choice was made of the Liquid Peptonoids manufactured by the Arlington Chemical Company of Yonkers, N. Y. A tablespoonful combined with a teaspoonful of whiskey and three ounces of water was thrown into the rectum every two hours with the happiest result, the patient soon manifesting signs of returning vitality. The stomach continued so irritable and intolerant, however, that for more than four weeks it absolutely refused to receive either a particle of food or a drachm of water. During this time the patient was nourished solely as mentioned, an average of five ounces of the preparation being used each day. During the four weeks the patient not only improved in strength but gained visibly in flesh. At the end of the time mentioned the stomach became slightly tolerant of food, but for still another month the alimentation was almost entirely by the same method. At the end of the second month the patient was sufficiently strong to endure, quite comfortably, a somewhat trying journey of fifty miles to the seashore, where she remained for ten days during six of which she retained, consecutively, every meal. The return journey, not occurring under favorable circumstances, proved exhausting and vomiting returned, forcing again a resort to rectal alimentation. Gradual improvement for two months followed, when removal to a new home in a somewhat distant part of the city was deemed expedient and safe. The result of the removal, with its accompanying excitement, was an alarming relapse. A period of twelve weeks succeeded, during which but one meal was retained, reliance being placed almost solely upon the peptonoids used per rectum. Burning and stinging pains in the region of the stomach aroused a suspicion of gastric ulcer which was confirmed by an eminent consultant and by subsequent hæmatemesis. The consultant, Dr. J. A. McCorkle, gave no hope of recovery. Feeding by the stomach was again for a long time utterly impossible, the blandest of food being rejected.

A complete history of this case would, I am sure, be interesting would time permit its recital. Suffice it to say that at the close of a full year of almost continuous rectal feeding the patient visited the mountains for the summer. On her return to the city, while she had gained much in strength and flesh, her severe and frequently recurring menstrual periods left no hope of recovery other than by the premature induction of the climacterium. With the concurrence of Dr. Alex. J. C. Skene the ovaries were removed. The operation was well borne, but was followed in a few days by irritability of stomach, inability to retain food, and recourse again for a number of weeks to rectal feeding as before. Then followed successively a winter of slow recovery, a summer among the hills and a return to the city in comparatively excellent health.

The success achieved by rectal feeding in this interesting case has led me to the frequent use of the same expedient in a number and variety of cases, all of which it would be as interesting to relate. It will, perhaps, be sufficient to say, however, that I have come to rely upon the use of nutrient enemata with as much confidence as upon any expedient to which I resort in the practice of my profession.

Partly in deference to usage I have thus far employed the term rectal alimentation or rectal feeding. This phraseology, however, I now wish to repudiate. Nothing can be more misleading or mischievous than the use of this term, as almost universally defined "the lodgment of food substance in the rectum to be absorbed therefrom."

It should be remembered that the rectum is not an organ of secretion but of excretion. It has been demonstrated that, normally, the rectum is empty except during the transit of excrement and serves only as a passageway from the bowels. Feces descending from the colon and impinging upon the nerves which supply the rectal walls, at once excite expulsive movements. The rectum is, therefore, neither anatomically nor physiologically fitted for the retention or absorption of food. To the failure to recognize this fact may be attributed much of the lack of success in nourishing by the anal orifice.

Lying beyond the rectum and easily accessible through it is a canal, the colon, more than four feet in length with a capacity within the abdomen of from two to six quarts. This canal is lined with a membrane whose function is to absorb. Hence the colon, unlike the rectum, is both structurally and functionally adapted to receive and appropriate nutrient material. I would propose for future use, therefore, the term "Recto-Colonic Alimentation." This term retains every advantage of the old nomenclature and suggests the nutrient possibilities of the colon's vast area of mucous membrane, aggregating nearly, if not quite, three times as much absorbent surface as the stomach itself presents. As the œsophagus serves as a means of access to the stomach, so should the rectum, for purposes of nutrition, be regarded as a means of entrance to the colon.

The substances used for colonic feeding should be nutrient, fluid, sterile, bland, absorbable, easily obtained and readily prepared.

That a nutrient enema should be nutrient would seem to be a needless statement, yet without doubt many failures have occurred from the use of food material deficient in nutritive power. Under this category, I think, may be included many, if not all the meat broths in which the effort to secure extractive matters by boiling has coagulated the albuminoids, thus rendering them insoluble and non-absorbable.

In order that the enemata may readily be thrown into the colon they must be fluid. Moreover, a solid or semi-solid substance is certain to leave a residuum in the bowels which serves as an irritant to the mucous membrane or a pabulum for the germs that infest the bowels of the sick.

An essential of paramount importance in nutrient enemata is that they should be sterile. Nothing, I am confident, has contributed so largely to failure in the past as the introduction of putrefactive and other germs with the injections. To this cause I largely attribute the irritable and diarrhœal conditions so often mentioned by writers on this subject as a sequence of rectal feeding.

The fact that proper materials for nutrient enemata have not been readily at hand or easy to prepare has been a large factor in rendering this method of promoting health or prolonging life a last resort rather than an early expedient.

The materials recommended by writers on this subject are egg-albumen, expressed meat juice, milk, beef tea, peptonized milk and beef tea, gruels, beef extracts, defibrinated blood, fat in emulsion and solutions of peptones.

The success I have had in colonic feeding has been attained mainly by the use of Liquid Peptonoids. Recently there has come to my notice a similar preparation called Panopepton, manufactured by Fairchild Bros. and Foster of New York City. Such test as limited time has enabled me to give this preparation leads me to believe that as favorable results may be expected from its use. So far as I am aware these two are the only preparations of the kind placed at our service by the manufacturing chemists. I know of no materials either manufactured or clinically prepared that, in theory and in fact, so fulfil the various requirements essential to a perfect colonic aliment.

Both preparations mentioned, it is claimed, consist essentially of the maximum amount of peptone that can be held in solution by sherry wine. The amount of stimulant they contain is found to be well adapted to the requirements of the majority of patients whom it is necessary to sustain by colonic alimentation. There are some cases, however, requiring a proportionally richer nutriment. This necessity for a similar but stronger food, I trust will soon be met.*

It seems a well recognized fact that the colon will absorb a certain amount of fat in emulsion. The value of fat as a constituent of nutrient enemata has not been fully appreciated. The subjects of colonic feeding are especially unfitted to received fatty foods by the stomach, yet many are emaciated and otherwise needful of this element of nutrition. Tubercular patients, so uniformly benefited by the exhibition of codliver oil and yet so often unable to tolerate or appropriate it, would be particularly aided by this method of administration. I am now conducting some experiments looking to the preparation of an emulsion, formed without the aid of an insoluble constituent, that will be suitable for this purpose. I regret that I must speak of the matter of colonic administration of emulsified fats largely from a theoretical standpoint, not having given it due attention in practice. I dwell upon the subject, hoping either to provoke discussion upon the point or to call forth a statement of experience.

Recto-colonic alimentation is applicable to all cases needing more nutriment than can be administered by the stomach. Not only so, but I have found that in some cases of extreme weakness nourishment can be administered in this way with less annoyance and less exhaustion to the patient than by the mouth. Indeed my nurses have frequently demonstrated that nutrient enemata can be given without rousing the patient from sleep. Especially true and important is this in the later stages of typhoid fever, as was recently illustrated by two severe cases in the writer's family.

Incidentally I mention the fact, also, that various medicines, essential and yet often irritating and nauseating to the patient when administered by the mouth, may be combined with enemata and be absorbed with as good effect as when exhibited in the usual way.

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* Since writing the above my attention has been called to Mosquera's Beef Jelly, sold by the firm of Parke Davis & Co., of Detroit, Mich. This, it is also claimed, is a preparation of peptones and is put up without an alcoholic menstruum.

I have also found colonic feeding to serve an excellent purpose after abdominal operations, and believe it is an invaluable expedient in strengthening feeble patients to endure the ordeal of operative procedures and in sustaining them during the period of anæsthetic disturbance of the digestive organs. While much might be said of the applicability of this method of nourishing the sick, I desire especially to urge the resort to colonic feeding early in the course of severe diseases, in order to conserve the vital powers rather than to consider it merely as a "dernier ressort."

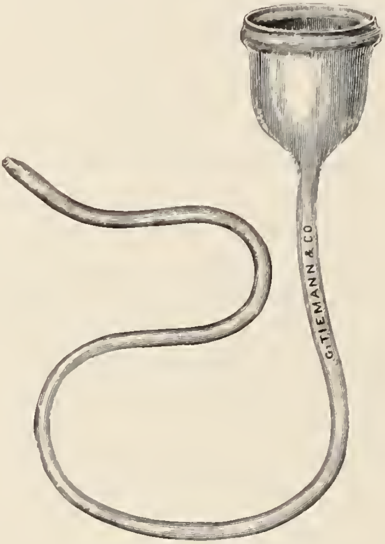
The first essential to colonic feeding is to clear the bowels of all fecal accumulations. This may often seem to be an unnecessary preliminary, patients often insisting that there can be nothing in the bowels, no food having been taken for many days. Nevertheless I have frequently been surprised by the large accumulations that have lodged in the colon for a week or more. This clearing of the bowels is best accomplished by one or more large clysters of plain warm water administered with the patient in the latero-prone position. This not only relieves the bowels of obstructive fecal matter, but tends to render them aseptic and to free the surfaces of accumulations of mucus. These clysters should be repeated from time to time, but not oftener than once daily.

In administering nutrient enemata the patient should be placed in the latero-prone or Sims' position. In cases of extreme weakness any part of the bed may be occupied for the purpose, but if the patient is not too feeble the hips should be brought to the edge of the bed and slightly elevated to favor the flow of the injected material into the colon.

In cases requiring prolonged colonic feeding, the greatest care should be exercised in dealing with the anal orifice. The nurse should remember that it is richly supplied with nerve endings, and is, perhaps, the most sensitive portion of the body. A soft aseptic or antiseptic unguent should be so applied that it will lubricate the inner surface of the anal aperture. I urge the gentlest care in accomplishing this preliminary, as well as in introducing the rectal tube, not merely that the tissues may not become inflamed but that the patient may not become irritated and wearied of the treatment by rude manipulation of the parts.

In this connection, also, I wish to condemn the use of hard rubber tubes and syringes. By the use of soft rubber instruments and the observance of the precautions just mentioned my patients have experienced no trouble from anal irritation.

For the administration of enemata I have devised the rectal tube which I show you. (See figure.) This instrument, manufactured by Tiemann & Co., consists of a soft but firm rubber tube thirty inches long. At one end is developed a cup-like form which serves as a funnel. The opposite extremity tapers slightly to an end opening. The walls of the tube are made thick, obviating the tendency of ordinary tubes to kink and obstruct the flow. The tube is cast in a glass mould and has thus imparted to it a perfectly smooth and unirritating surface. It is complete in itself; is without joints, valves or connections that may be lost or that may harbor sepsis. It is easily cleaned, convenient to use and readily carried in the physician's bag or pocket.


G. TIEMANN & CO.

AUTHOR'S RECTAL TUBE.

In use the rectal end of the tube should be well lubricated and introduced gently from three to six inches within the sphincter ani. The funnel end should then be raised ten or fifteen inches and the enema poured with a continuous flow from a pitcher. If necessary the funnel may be held two feet above the anal opening thus giving an abundance of fall to carry the fluid readily into the colon.

In this way, with the patient in Sims' position a large quantity of fluid of the temperature of the body may be caused to flow into the colon, producing absolutely no sensation in its transit through and leaving no remnant in the rectum.

Thus may be exploded three popular and mischievous errors: first, that any considerable force is necessary to carry fluid into the colon ; second, that a flow of fluid into the rectum will accumulate there and result in expulsive movements ; third, that in order to introduce fluid into the colon, it is necessary to carry a tube through the sigmoid flexure.

Many physicians doubt the possibility of passing a tube through the sigmoid flexure into the colon. Viewing the sigmoid at a recent autopsy I was quite disposed to think the doubt well founded. However, by introducing water through the tube and causing a local distention of the bowel about the end of the advancing tube I am inclined to think the passage may be made. For nutrient purposes the procedure has no merit and many disadvantages. Even if successful the result is a serious irritation of the nerves of the patient if not of the mucous membrane of the bowel.

For colonic feeding, if choice is made of either of the solutions of peptones I have mentioned, from one to two ounces may be administered to an adult every two to four hours. From two to six ounces of sterilized water should be added to each enema. It should be remembered that water is an essential constituent of food and is a remedial agent often too lightly valued. Large quantities of cold water thrown slowly into the colon quench the thirst and lower the temperature of fevered patients. A liberal amount of water should, therefore, be added to enemata of fever cases.

An interesting case, occurring in the writer's practice within the past few days, illustrates this point as well as the surprising capacity of the colon for the retention and absorption of fluid.

Miss A. was attacked with pleurisy. Later, severe pneumonia developed attended with high fever, dry skin and tongue, great thirst with nausea and vomiting, also constipation and scanty urination.

An efficient and reliable nurse was placed in charge and directed to nourish the patient by the colon. She was also instructed to administer a pint of water in the same way every hour until symptoms arose indicating the advisability of discontinuing the use of the water.

Finding the temperature lower and the patient otherwise much improved at the next visit, further directions regarding the enema were inadvertently omitted, and the injections were continued so that the patient received into the colon and retained without difficulty an average of eighteen ounces of fluid every hour for twenty-nine hours or a total of over four gallons.

During the administration of the enemata the temperature subsided, the tongue and skin became moist, the cough became loose and expectoration free. At the termination of the time mentioned the bowels moved freely a number of times and the urine was excreted abundantly. The nutrient enemata, in this case, consisted of an ounce each of panopepton and milk with two drachms of whiskey. The patient made a rapid and satisfactory recovery. This undoubtedly was an exceptional case. Few patients could probably tolerate so much fluid in the colon.

After a nutrient enema is given, the patient should remain for some time in a horizontal position. If the upright position is assumed before absorption occurs the fluid promptly gravitates to the rectum and excites expulsive movements.

Occasionally rejection occurs, however carefully the enema may be administered. I have never known this to recur more than once or twice in succession and in the use of peptonoids I have yet to meet a case in which diarrhœa or any irritation or inflammation of the rectum or colon has occurred.

306 Sumner Avenue,
Brooklyn, N. Y.

DISCUSSION.

Dr. E. H. Bartley : Did I understand Dr. Day to say that he always passes this tube through the sigmoid flexure?

Dr. Day : I never pass it through the sigmoid flexure, only six or eight inches within the anal orifice.

Dr. Bartley : I have had some experience in this line. I cannot relate as startling a case as the writer of the paper, but I am certain I have for three or four weeks kept a patient on a different mixture without loss of flesh, in a case of acute gastritis. This was some years ago, and before I became acquainted with this mixture, and in fact before it was put upon the market. I used a mixture of minced beef, hydrochloric acid and pepsin, allowing it to remain at a warm temperature for some time and then taking such portion as I could handle and injecting it with an ordinary syringe. I am certain this patient had no nourishment by the mouth for about four weeks. A little water was occasionally given, but almost entirely rejected.

I am not so sure in my own mind, as the Doctor is, apparently, that peptone is the only thing that we can make use of for perfect nutrition in this way; in fact I am very much of the opinion that pure peptone is not the best thing to use; that a mere solution of peptone and alcohol in water is not the best and only thing to be used. I am sure I have seen better results by the use of a more mixed diet, adding this mixture that he uses, or some solution containing peptone or albumose — the intermediate product of digestion between albumin on the one hand and peptone on the other — adding those to milk or to milk with the white of egg, or whole egg beaten up. I have employed more often, perhaps, the solid or powdered peptonoids furnished by the same firm. In fact it has become a sort of routine practice to use the powder rather than the liquid and add the alcohol in the form of whiskey, or some other form, and I always feel after a short time as though my patient would do better not to be confined too closely or entirely to a strict peptone diet. While peptone will sustain life for a considerable time, I do not think that they do as well. I should much prefer to use sterilized or Pasteurized milk, that is, milk heated up to a temperature not quite sufficient to coagulate the albuminoids and yet sufficient to inhibit the micro-örganisms so that they would do very little damage.

I am not so sure in my own mind, either, of the necessity of this sterilization in that portion of the body. Where these organisms have to pass the whole length of the alimentary canal there is much more necessity for sterilization than where they are simply put in at a few inches above the rectum, because they can be so easily passed out. Any disturbance there will, as the Doctor says, create a diarrhœa or a looseness or a flatus, which can be so easily passed out that I do not think we need fear any disturbance unless actually putrid matter is put in, in which case, of course, we would develop poisonous materials which would poison the patient. I have recently, however, seen milk vomited by a lady a half-hour after it was injected per rectum. Her stomach had been twice irrigated since she had taken any by the mouth. I have frequently seen the white of egg absorbed in considerable quantities. It has been shown that the limit of the absorption of the albumin in the white of egg is six grammes in twenty-four hours. That would correspond to about fifty grammes of the white of egg as we take it from the egg, or about the whites of two eggs. The whites of two eggs then can be absorbed in each twenty-four hours by this method, and that, of course, would represent considerable nourishment. Now, if you will add to that, milk, you get the carbo-hydrates in the form of milk sugar, which is quite readily absorbed ; you get at least the soluble albumin in the milk, also absorbable. I would suggest to the Doctor an emulsion of fat in the form of milk, which is always to be had, to obtain the fats in the rectum in suitable form.

Dr. Day : I wish to say that I did not intend strictly to advocate the universal and exclusive use of manufactured peptones as nutrient enemata. I anticipated that others would relate their experience in the successful use of other materials than those mentioned in my paper.

I am confident that milk, egg-albumen, expressed meat juice and defibrinated blood can be successfully employed for this purpose, provided they are obtained fresh and can be prepared and administered by an intelligent and painstaking nurse. These essential conditions, however, are so difficult to obtain in a large proportion of cases that I am strongly disposed to believe that the use of a food substance adapted to the purpose by some reliable manufacturer, will give far the best results in general practice.

It is probable that no single substance exists or can be devised that will be alike applicable to every case requiring colonic alimentation. The intelligent physician will therefore endeavor to adapt one or more of the various materials that have been mentioned to the particular case under his care.

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SMALLPOX IN BROOKLYN.

BY F. A. JEWETT, M.D.,

Chief of the Bureau of Contagious Diseases, Brooklyn Department of Health.

Read before the Kings County Medical Association, April 10, 1894.

The present epidemic of smallpox in Brooklyn began January 27, 1892, since which time the city has not been free from the disease for a month, summer or winter.

From October 2, 1888, to January 27, 1892, there were no cases reported to the Department of Health.

The first case in 1892 occurred in the Seventh Ward. The patient, a young man of eighteen years, lived with his parents and worked in a book-bindery in New York. The source of contagion could not be traced, but was probably in New York. He was promptly sent to the hospital, the house fumigated, and the inmates all vaccinated. In addition, the neighboring houses for several blocks around were visited and vaccination offered to the occupants, and the scholars in a neighboring school were vaccinated at the school.

The second case occurred in the Twenty-sixth Ward, nearly three miles from the first. It was reported on February 14th. First taken sick on February 6th. This case was traced to Canarsie. This section was also thoroughly canvassed for vaccination. The third case in the Sixth Ward was sick on or about March 16th. Source of contagion traced to a vessel on river front. From this case several points of infection were established, and from that time on the disease continued to spread. The first three months of 1892 one case each month was reported. In April there were 14 cases; May, 11; June, 8; July, 1; August, 9; September, 5; October, 45; November, 51; December, 38; total for the year, 185. In January, 1893, 49 cases; February, 37; March, 44; April, 42; May, 29; June, 17; July, 46; August, 20; September, 16; October, 34; November, 43; December, 71; total for year, 448. In January, 1894, 70; February, 65; March, 149.

Of the cases reported this year a large proportion occurred in the Twenty-seventh Ward, which is thickly populated with Germans. The estimated population of this ward, January 1, was 33,477. In the early part of February, two houses were found in that ward that had been infected since early in December, 1893. Case after case occurred and was concealed, meanwhile the inmates were going about their usual work, many taking in tailoring and the children going to school. There seemed to have been a mutual understanding among them to keep the cases from the Health Department, and it was by mere accident that knowledge was obtained of them. A slight clew given by some one in a distant part of the ward was followed up with the result of unearthing one of the worst nests it has ever been my ill-fortune to see. Nearly the entire vaccinating staff was put at work in this district at once. After a few days' trial, owing to a large number of refusals, it was found necessary to insist on vaccination, and the police were put on all houses where the inmates refused, and they were kept quarantined until they submitted. In many instances these people owe their escape from smallpox to this action. A parochial school in close proximity to the houses in which the aforementioned cases were concealed, was visited and about a thousand children vaccinated, of which fully fifty per cent. had never been vaccinated. These children ranged in age from four to thirteen. Several children, who were absent from school the day the vaccinators visited it, afterwards came down with variola. I am pleased to say that that ward is now about free from the disease. Occasionally a case is reported in some remote part of the ward in a family that has been unavoidably overlooked by the vaccinators.

A period of freedom from smallpox for over three years and a period of more than ten years since the city had had any serious outbreak had rendered people careless as to vaccination. Hence the large number of unvaccinated children. Even the public schools, supposed to be protected by a State law, average about fifty unvaccinated children to a school, owing in a great measure to the careless way in which vaccination certificates are often given. The disease has not been confined to any section, however, and no ward has escaped. There seems to have been a large proportion of cases among the German population, though I have been unable to look up the exact figures.

In connection with the subject of vaccination, I would say that in one family exposed to contagion three unvaccinated children were found who presented a certificate of vaccination from a physician. The inspector examined their arms and found no scars. He was then told that they had been vaccinated by the administration of variolin. He insisted on vaccinating in the usual way and got three typical vaccine vesicles.

The record of smallpox in the city for the last twenty-three years is as follows:

1870............	97 Cases.	1882............	185 Cases.
1871	373 "	1883............	12 "
1872............	737 "	1884	14 "
1873............	113 "	1885............	16 "
1874	53 "	1886............	125 "
1875............	2,519 "	1887............	194 "
1876............	1,131 "	1888............	374 "
1877............	86 "	1889............	0 "
1878............	0 "	1890............	0 "
1879............	0 "	1891............	0 "
1880............	15 "	1892............	184 "
1881............	498 "	1893............	449 "

LUGOL AND MAGENDIE.

The portraits which, through the kindness of Dr. J. H. Hunt, we are able to present to our readers to-day, are those of the famous French physicians Lugol and Magendie, of whose lives and contributions to medical science we shall speak at length in the June number.

CORYDON L. FORD, M.D.

As we go to press, the death of this distinguished and beloved teacher of anatomy is announced.

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EDITORIAL.

THE DANGER FROM TUBERCULAR MILK.

The recent death of a four-year-old child from tubercular meningitis, which the experts believe they have traced to the milk of a tubercular cow, emphasizes the importance of the precautions which the Medical Society of the County of Kings has recommended to the Health Commissioner for his adoption. In connection with this subject we would direct the special attention of our readers to a paper read by Prof. James Law, of Cornell University, before the New York State Veterinary Society at its January meeting, on "Unsuspected Poisoning by Sterilized Meat and Milk of Tuberculous Animals," published in the New York Medical Record of March 10, 1894. Extracts will be found in the discussion of the recommendations adopted by the County Society, above referred to.

VACCINATION AND ITS PROTECTIVE INFLUENCE.

We desire to call attention to a circular, printed elsewhere, which has been sent by Health Commissioner Emery to the physicians of Brooklyn, in which he urges upon them the necessity of primary and revaccination, supporting his recommendations with statistics illustrating their benefits to mankind. The effect of this circular and of the general agitation of the subject has been to arouse the usually apathetic public, and as a result thousands of vaccinations are being made daily. In one week 38,000 vaccinations were performed by the officers of the Department of Health. If Commissioner Emery could present at the close of the season a statement of the number of vaccinations, both primary and revaccinations, which have been performed in the city during the present agitation, it would, we are sure, be impressive. A request to physicians to report the number would, we think, be generally complied with. For his energy in the matter Dr. Emery is entitled to the thanks, not only of the profession, but more especially of the laity, in whose interest these efforts at protection have been made.

We would also like to suggest to the Commissioner that he inform the public of the fact as to vaccination in each case of smallpox that comes under the notice of the Department. This, we fancy, would be a striking way to impress the importance of the operation, and to demonstrate the evil results of its neglect.

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VACCINATION IN THE PUBLIC SCHOOLS.

By direction of the Health Committee of the Board of Education, of which Dr. Robert A. Black is chairman, a complete inspection has been made of the children attending the public schools, and as a result it has been found that 4000 of them have never been successfully vaccinated, *i. e.*, present no cicatrices whatever, and that more than 6000 have not been revaccinated within recent years. The Board of Education proposes to enforce the provisions of Section 200 of chap. 661, laws of 1893, which says: "No child or person not vaccinated shall be admitted or received into any of the public schools of the State, and the trustees or other officers having the charge, management or control of such schools shall cause this law to be enforced. They may adopt a resolution excluding such children and persons not vaccinated from such school until vaccinated."

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ARE THE CERTIFICATES OF VACCINATION RELIABLE?

Under an existing rule of the Board of Education of Brooklyn, no child can be admitted to the public schools without the certificate of a physician that he has been vaccinated. The inquiry naturally arises; how did the unvaccinated children found in these schools gain admission? Did the principals admit them without certificates, or did physicians give certificates without examining the arms of childnre, or were the children vaccinated, and no subsequent examinations made to ascertain whether successfully or not? When the returns are all in we hope to be able to answer these questions.

PHYSICIANS' AND SURGEONS' PHARMACEUTICAL COMPANY, OF BROOKLYN.

The laboratory of this organization has been established at 11 Elm Place, and has for some time been opened for business. The company has been organized for the express purpose of compounding prescriptions of fresh drugs of absolute purity, guaranteeing accuracy and reliability. The membership is limited to the medical profession, and the association is not in any sense a general drug store. The officers are, A. S. Higgins, Jr., president; R. H. Pomeroy, M.D, vice-president; H. F. Jewett, M.D., treasurer; H. Plympton, M.D., secretary. These gentlemen with J. O. Polak, M.D., compose the Board of Directors.

PROFESSOR FRANK E. WEST, M.D.

Frank E. West, M. D., professor of Materia Medica and Therapeutics and Clinical Medicine in Long Island College Hospital, has been appointed visiting physician to the Brooklyn Hospital.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

The Congress, composed of fourteen National Associations, will hold its triennial meeting in Washington in the latter part of the month of May. The representative character of its membership, and the fact that it has as the chairman of its Executive Committee Dr. Landon Carter Gray, are sufficient guarantees of the value of the approaching meeting to the profession at large.

OBITUARY.

CHARLES COREY, M.D.

The death of Dr. Charles Corey, which occurred from pneumonia on April 4th, was a startling surprise to the profession of Brooklyn. It was but a few days before that we had seen him engaged in the active defense of the character of a brother practitioner who had been publicly assailed, and at that time he evinced all the mental strength which he was known to possess to so great a degree, but he seemed then to be in anything but vigorous strength of body. His reputation as an alienist was national, and his services as an expert in insanity cases were often called into requisition. As man, friend and physician he had few superiors in either city, and his loss will be deeply felt by all who knew him, in whatever capacity he and they may have been associated.

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KINGS COUNTY MEDICAL ASSOCIATION.

The next meeting of this association will be held May 10th. Dr. B. B. Mosher will read a paper on Pott's Disease.

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PROCEEDINGS OF SOCIETIES.

ASSOCIATION OF ALUMNI OF ST. MARY'S HOSPITAL,

BROOKLYN, N. Y.

This Society was incorporated February 15, 1894.

Membership limited to ex-members of the house staff of St. Mary's Hospital, in good standing.

Object of the Association, "The improvement of its members in the knowledge of medicine, surgery and kindred sciences. The promotion of social intercourse amongst the members."

Regular meeting on the third Monday of April of each year.

The annual meeting was held at the rooms of the Medical Society of the County of Kings on April 16th.

The following papers were read:

"Sources of Error in Vital Statistics," by Dr. G. E. West, Secretary Health Department, City of Brooklyn.

"Cystitis from a Surgical Standpoint," by Dr. L. E. Tieste, of Brooklyn.

"Therapeutics of Digitalis in the Pneumonia of Children," by Dr. De la Vergne, House Surgeon, St. Mary's Hospital.

The Annual Dinner was held at the Union League Club in the evening.

OFFICERS OF THE ASSOCIATION.

1893–94.

President,	Dr. John C. Mac Evitt,
Vice-President	Dr. Isaac H. Platt,
Secretary,	Dr. William E. Sullivan,
Treasurer,	Dr. Robert J. Morrison,

Executive Committee,
Dr. Walter J. Corcoran
Dr. Onslow A. Gordon and
Dr. Joseph J. O'Connell.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society Building, 356 Bridge Street, on Tuesday evening, February 20, 1894, at 8 o'clock.

The President, Dr. George McNaughton, in the chair.

There were about 150 members present.

The minutes of the January meeting were read, and after correction by striking out the word "accepted", in reference to the report of the Committee on Tuberculosis, were approved.

The Council reported favorably upon the following applicants and recommended that they be elected to membership :

Drs. Allen Smith Heath, Leo Rattner, W. W. Moon, J. A. Somers, E. T. Buck, J. F. McCaw.

ELECTION OF MEMBERS.

The following, having been regularly proposed and favorably passed upon by the Council, were declared elected to membership :

Drs. J. S. Wood, J. J. Terhune, William A. Tomes, J. B. Thomas, and R. E. Coughlin.

APPLICATIONS FOR MEMBERSHIP.

The Secretary presented the following propositions :

Dr. Stuart H. Benton, 1,063 Bergen Street, University of Buffalo, 1870, and Bellevue, 1879 ; proposed by Dr. G. A. Evans ; Dr. W. B. Chase.

Dr. Wm. Waterworth, 3 Hancock Street ; Bellevue, 1878 ; proposed by Dr. Walter B. Chase ; Dr. Geo. A. Evans.

Dr. Louis C. Ager, Blythebourne, L. I., L. I. C. H., 1893 ; proposed by Dr. Chas. Corey ; Dr. E. H. Wilson.

Dr. E. Frank Marsh, 470 Ninth Street, Albany Medical College, 1882; proposed by Dr. J. H. Raymond; Dr. Geo. McNaughton.

Dr. Frank Terry Brooks, Long Island College Hospital, L. I. C. H., 1894; proposed by Dr. J. H. Raymond; Dr. Geo. McNaughton.

Dr. Geo. R. Hawley, 291 Gates Avenue, L. I. C. H., 1892; proposed by Dr. F. H. Stuart; Dr. David Myerle.

Dr. J. F. Golding, 262 Gates Avenue, College of P. & S., N. Y., 1871; proposed by Dr. Jos. H. Hunt; Dr. S. G. Clarke.

The Chair announced the special order of business was the second reading and discussion of the report of the Committee on Tuberculosis.

In the absence of the chairman of the committee. Dr. Evans read the report which was discussed, amended and, as finally adopted, is as follows:

Mr. President and Members of the Medical Society of the County of Kings:

"At the November meeting of this Society a communication was read from Dr. John Griffin, Health Commissioner of the City of Brooklyn, requesting the Society to take under consideration and to advise his department as to the best practical measures for limiting the prevalence and progress of pulmonary tuberculosis in this city. In deference to this request, and in accordance with a resolution which was offered by Dr. Z. T. Emery, unanimously passed by the Society, the President, Dr. J. C. Shaw, appointed a committee, consisting of Dr. J. A. McCorkle, Dr. George A. Evans, and Dr. Ezra H. Wilson, to consider and report upon the matter.

"After careful deliberation, your Committee counsel that the Society make the following recommendations to the Health Commissioner in reply to his letter asking for advice:

"Inasmuch as our knowledge of the cause and the method of dissemination of tuberculosis is exact, and that the majority of medical men recognize it as a contagious disease caused by the entrance into the body and the development of the tubercle bacillus, and that in the vast majority of cases the element of contagion is the sputum from the lungs of those afflicted with pulmonary tuberculosis, and that upon the proper care and disposal of the sputum depends our successful efforts to prevent the spread of the disease, and to increase the chances of recovery of those already afflicted, we urge upon you to take immediate action upon the following recommendations:

"First: That the secular press, circulars, etc., be utilized to educate the public that pulmonary tuberculosis is an infectious disease, that it is acquired by the direct transmission of tubercle bacilli from the phthisical to those who are in health by means of the dried and pulverized sputum floating as dust in the air, and through infected meat and milk, and that it can be largely prevented by simple and easily applied measures of cleanliness and disinfection and by sanitary control of the meat and milk supply.

"Second: That all public institutions, such as asylums, homes, hospitals, dispensaries, etc., be required to transmit to the Board of Health the names and addresses of all persons suffering from pulmonary tuberculosis within seven days after the time when a positive diagnosis can be made.

"Third: That the Health Department establish a hospital to be known as the Consumptive Hospital, to be used for the exclusive care and special treatment of this disease, and that, so far as practicable, all inmates of other institutions suffering from pulmonary tuberculosis be transferred to this hospital.

"Fourth: That the Health Department undertake the bacteriological examination of the sputum for diagnosis in every case of pulmonary disease of doubtful character in hospitals or private dwellings or tenement houses, when the physician in attendance desires that this be done; this procedure to be carried out with a view of obtaining definite knowledge upon which the proper sanitary surveillance of those suffering from tuberculosis can be based.

"Fifth: That whenever the Health Department has become aware of the existence of families or premises where tuberculosis exists or recently existed (as in case of death or removal), it shall take such specific measures as are required in each case.

"Sixth: That the Health Department secure the passage of an ordinance by the Common Council of this city, requiring corporations controlling public conveyances to frequently disinfect such parts of their property as are contaminated with expectoration.

"Seventh: That a special bureau be established, to be known as the Bureau of Pathology, Bacteriology, and Disinfection, for the proper performance of the work as detailed above, and to which shall be referred the investigation of all cases of infectious and contagious disease that may require the attention of the Health Department.

"Eighth: That the Health Department cause frequent examinations of the milch-cows from which is derived the city's milk supply, and the examination of the animals killed for food at the slaughter houses of the city, and that for this purpose only qualified veterinarians be employed.

"Ninth: That we recommend to the Commissioner of Health that he determine and limit the minimum of air space to be allowed to cows furnishing milk to be sold in this city."

J. A. McCorkle,
Committee, Geo. A. Evans,
Brooklyn, January 16, 1894. Ezra H. Wilson.

Dr. George A. Evans read a paper on "Contagion in Tuberculosis."

Dr. Geo. R. Fowler read a paper on "Tuberculosis from the Surgical Standpoint."

Discussion by Drs. Stuart and Wilson.

The Chair stated that Dr. Westbrook was unable to be present and present his paper on the "General Principles of Treatment of Chronic Lung Diseases (Concluded,)" owing to an urgent professional engagement.

The Chair announced the presence of Dr. E. B. Skinner, of Mineola, a delegate from the Queens Co. Med. Society.

REPORTS OF COMMITTEES.

The Committee to confer with the Telephone Company reported progress.

Dr. Raymond referred to the accident of persons becoming unconscious on the street and being taken from hospital to hospital and oftentimes refused admittance, and moved the adoption of the following:

Resolved, that a committee of three be appointed by the President to report to the Society what means have been provided in the City of Brooklyn for the immediate care of persons found unconscious on the streets. Seconded and adopted.

The Chair thereupon appointed as such Committee, Drs. J. H. Raymond, L. D. Mason and John C. Shaw.

There being no further business on motion, the meeting adjourned.

David Myerle, M.D.,
Secretary.

DISCUSSION OF THE REPORT OF THE COMMITTEE ON TUBERCULOSIS.

Dr. F. H. Stuart: Since I have been a member of this Society I do not recall any resolution or recommendation or any paper that has been before it of equal importance or reach. The resolutions that are offered for our consideration, I trust most sincerely and heartily will be adopted with practical if not entire unanimity. If they have our endorsement they will carry with them the weight to the community which they deserve and ought to have. The two excellent papers to which you have listened served as a most admirable introduction to the discussion and consideration of the subject. It is a truth, nevertheless, that the medical profession itself as a body (and I trust I may be pardoned if I am making the charge without foundation) needs to be further educated on the very point under discussion. We have been drifting along with the tide of progress, reading and doing some studying in laboratories and in private, thus keeping pace with the progress in the centres of investigation. the results of which investigation we have just been listening to in the paper by the gentleman who has last spoken, and yet I have the impression that there has been a sort of passive reception by the profession of these discoveries, so important, so far reaching, and so entirely revolutionary. We were struck with that to-night. The ordinary phrases which are used in referring to tuberculosis are still current in the medical profession ; phrases that have been current and which were the authoritative expressions years ago do not certainly pass now unchallenged, as they have been challenged here. If the medical profession will take this subject in hand and study it in the light of the present knowledge, I think there cannot be two opinions in regard to what action the Society should take upon the resolutions which are before us. I hope that the discussion will be full, and I hope that the impression made both by the last paper as well as the first will be most profound. Those papers contain the very quintessence of what has been written, presenting the results of labor by the brightest minds and the most earnest students that ever pursued the investigation of any subject. The demonstration of the truth of their conclusions is so clear and so positive, that it seems to me a medical man who hesitates to plant himself upon the firm ground established by this scientific investigation simply proclaims to his professional brethren and to the public that he has shut his eyes and closed his ears and his mind to the information which is accessible to everybody.

This series of resolutions leads to action by the only authority in the community for doing two things for the community ; first, to educate the community ; second, to enforce, in a certain degree—and I think that will have to be gradual—to enforce what the present knowledge of this subject requires. Other communities have already taken this important step of education and not only in the way of education, but for the enforcement of regulations for the prevention of the spread of tuberculosis and to its eradication. To use such an expression is, perhaps, chimerical. It may seem so now, but what would have been said 125 years ago in regard to smallpox, which was then much more prevalent than tuberculosis today. And yet vaccination has accomplished what was promised for it. That which at first was thought to be a chimera we have lived to see a demonstrated fact. So in regard to other diseases.

I have here in my hand the statistics with a graphic presentation of what the State Board of Health of Michigan has done. It shows how in certain acute diseases the enforcement of regulations for their isolation and restriction have very markedly diminished both the death rate and the sickness rate. The same thing, I am sure, will be able to be shown in regard to tuberculosis as soon as there is a general movement by the profession and in turn, as the community is educated by the profession, by the community itself, acting upon the lines which our present knowledge dictates. The first thing for the Board of Health to do is to educate the community, and these resolutions point out the way by which that can be done. I think there can hardly be any one in the community who has not read of this matter in the papers. It would be much more difficult to find an individual who was presenting himself as a candidate for a juryman who would be able to plead ignorance of the facts of a case before the court, than it would be to find now an individual in the community who is not familiar to a certain extent with this whole idea of the cause and the means of the spread of tuberculosis. The tuberculin craze of two years ago did a very important work, though it was negative in its results as a curative agent, in educating the community as to the nature of tuberculosis, and as such I think it was fortunate there was such a mania all over the world in regard to tuberculin. The community is very well educated, as I say, in the idea that tuberculosis is due to a germ, but it has been long enough before the community—fourteen years or more—for them to get familiar with the idea that tuberculosis is due to a germ, and I think there has grown up an apathy in regard to it since the failure of the tuberculin treatment. We have rather settled back upon the thought, "We may know that tuberculosis is due to a germ, but what is the use of knowing it if we cannot cure it." Very true; but we cannot cure smallpox, we cannot cure scarlet fever, we cannot cure measles, and so with other diseases. These are the infectious diseases that are most prevalent; yet we recognize that having learned the nature of the disease, if we can control its invasion and its spread in the community we are in that way so far controlling and eradicating the disease. If we educate the community thoroughly to the idea that the real way to control tuberculosis is to prevent it, we may go before them and acknowledge we cannot cure it. The main point is to prevent it and to teach them how to prevent it; that I say is the first and most important thing for the Board of Health to do.

This is not a novelty that is proposed here. Other communities have already taken steps in regard to it. I have taken a little trouble to write to different individuals whom I knew were interested in this subject. I have already referred to the action of the State Board of Health of Michigan. The State Board of Health of Michigan last September adopted this resolution declaring consumption to be a disease dangerous to the public health: "Resolved, that hereafter consumption, and other diseases due to the bacillus tuberculosis, shall be included in the official list of diseases dangerous to the public health, referred to in sections 1,675 and 1,676 of Howell's Statutes, requiring notice by householders to the local health officer, as soon as the disease is recognized." The secretary of the Board of Health has appended to this resolution this instruction:

"In this resolution the question of isolation of the patient is not mentioned. Its purpose is to secure to the local health authorities and to the State Board of Health, information of the location of each case of this most dangerous disease, with the view of placing in the hands of the patient reliable information how to avoid giving the disease to others, and in the hands of those most endangered, information how to avoid contracting this disease."

The State Board of Health, in accordance with the resolution, caused to be printed a circular covering four pages, with this title: "Restriction and Prevention of Consumption." A second edition of this leaflet, of 10,000 copies, was issued August 10th, 1892. The headings of the different paragraphs are: "Consumption is a Most Common and Fatal Disease;" "Consumption is Now Known to be a Communicable Disease;" "The Mode of Communication of This Disease;" "Destruction of the Sputa;" "How the Sputa Should be Destroyed;" "Destruction of the Dejecta;" "Ventilation of Buildings;" "Personal Precautions;"

"Exposure to Cold Should be Avoided;" "Disinfection—Rooms to be Disinfected;" "Boil Milk from Suspected Sources;" "Tuberculous Meat;" "Collection of Information." Then on the last page they have a drawing, a very poor one it is true, of the usual appearance of the bacillus tuberculosis. But more eloquent than words is the graphic representation of the different causes of death in the State. Dr. Fowler referred to the fact that one-seventh of the deaths that take place in the community are due to tuberculosis. Do we stop to think of that when we read a long list of causes of death, when we take up a statistical report of a year or a week of the causes of death, that one-seventh of all is due to one disease—and what disease? This disease that we are considering to-night; this disease which, in the light of our present knowledge, is a *preventable* disease; this disease which we control, because it is a preventable disease, and which we ought not to be discouraged from undertaking to control because it is so prevalent. Consumption heads the list.

I remember when I was Registrar of Vital Statistics in the Board of Health of Brooklyn over sixteen years ago, I instituted a form of weekly report, which is still kept up and has been ever since, which you see in the paper every week, in which one of the statements always is the four chief causes of death. If you will look at that report week after week, you will see that one of the four chief causes of death is always consumption. I recall that during my administration of that office there was but one week, during an epidemic of smallpox and a simultaneous epidemic of diphtheria, in the winter season, when pneumonia was also prevalent, when tuberculosis dropped out, but I do not remember any other; and so it has gone on. I noticed before I came here to-night, in the last printed report of the Board of Health, that the deaths from consumption alone exceeded those from any other two diseases in the weekly report.

Here is another paper relative to the Michigan State Board of Health, to which I will refer. [Dr. Stuart here exhibited the diagrams.] The graphic presentation here shows the results of isolation and disinfection and their effect upon scarlet fever, but it will bear upon this question. Here the first half of the page represents scarlet fever; the first column represents the percentage of deaths in five years, the average number of cases and deaths before isolation, when isolation was neglected. Look at that black monument, and this is the death rate. In contrast with that is the representation of the average when disinfection and isolation were enforced in regard to scarlet fever, and there is the death rate. What a dropping off!

Here is the same thing shown in regard to diphtheria. This is when isolation and disinfection were neglected, that represents the prevalence of diphtheria, and this is the death rate. When isolation and disinfection were enforced the sickness rate was actually less than the death rate before, and the death rate merely a decimal fraction of one.

Here is a similar presentation in regard to the lives that were saved by enforcing and not enforcing the sanitary regulations. The State of Michigan is acting as a State for the whole community. Its work in this line is worthy of imitation.

The city of Providence has taken action similar to that which is proposed by the resolutions before us to-night, and I have here in my hand a little slip that they distribute for the information of the community, in regard to the prevention of consumption.

I have also two tracts, as they call them, issued for gratuitous distribution by the Pennsylvania Society for the Prevention of Tuberculosis. The first tract has for its object: "How to Avoid Contracting Tuberculosis." The second tract is addressed to "Those Suffering from Tuberculosis; How They Can Avoid Giving This Disease to Others." So in Philadelphia this work is going on.

I happened to notice in the British Medical Journal for January 6, 1894, that Dr. Hoy, Health Officer at Aberdeen, recommended disinfection, after death by phthisis, of rooms, buildings, and clothing. I said a few moments ago that every one of the community is informed and convinced that tuberculosis is due to a germ or bacillus, but they forget about it just as they do about the other diseases due to similar causes. By the health authorities taking action, and in every case where they were informed of the existence of tuberculosis, sending information or little tracts bearing upon the subject, the facts in regard to the disease would be kept before the people all the time, and I think in a very short time that a great change in regard to the prevalence of tuberculosis will be noticed.

I do not like to occupy more time, because there are so many others who are better able to speak than I am. There are some other things I would like to say but I forbear.

Dr. Ezra H. Wilson: There seems to be a unanimity of opinion as regards the nature of tuberculosis and as regards the methods of preventing it, and yet I want to say that bacteriologists are not making claims in regard to the ætiology of disease without a definite and distinct method of investigation. Before any one is justified in claiming the ætiological relation of a certain organism to a certain disease he must forge four links in a chain. In the first place that organism must always be associated with that disease, and in the second place with no other disease; in the third place, we must be able by isolating this organism in a pure culture and inoculating susceptible animals, to produce that disease and no other disease; and in the fourth place we must be able, on the death or killing of the animal, to recover the organism in pure culture from the body. The infectious diseases in which we can fulfil all the indications are very few, but tuberculosis is one of them.

I hardly think it is necessary to-night to go to any length to demonstrate the contagiousness or infectious nature of tuberculosis. The recommendations which your committee have put before you include certain measures for the prevention of the spread of this disease in this community. As Dr. Stuart has said, we are not alone in this work. The American Public Health Association in its meeting at Chicago, passed resolutions recommending legislation for the restriction of the spread of tuberculosis. The Hygienic Section of the Pan-American Medical Congress at Washington lately adopted similar resolutions, and probably most of you have read in the New York Medical Journal of the proceedings in Philadelphia, before the Congress of Physicians there, which resulted in the adoption of similar resolutions.

Now, while I do not insist that these resolutions should be adopted as they are, I say that these or similar resolutions should be adopted. The question is important; other communities are doing this thing, other communities are recognizing this disease as a preventable one and are adopting measures to prevent it by legislation, and the question seems to me to be, not the fact that the disease is an infectious and contagious one and that we should prevent it, but how to prevent it and how far we can go in doing this. In conversation with the President of the New York Board of Health, he told me they intended to put tuberculosis on the contagious list. We will have to feel our way in obtaining the registration of every case of tuberculosis whether wealthy or poor, or private house or hospital. The recommendations of your committee have not included the enforced registration of tuberculous patients in private houses; that might be obviated to a certain extent by registering the house instead of the patient.

I think that the discussion should be confined more to the possibility of putting the recommendations in force, and I would like, if the Chair so pleases, to take the recommendations up in reglar order and discuss them in that way. It would hasten matters and make it very plain.

Dr. Raymond: I think it is exceedingly important, inasmuch as this meeting and the action of this meeting are likely to become historical, that we should have a very complete statement of the facts so far as in our possession, bearing on this question. Dr. Stuart has rightly said that no subject has ever been brought before the Society which was so far-reaching as this. It seems to me, therefore, it is a subject which we should not hurry over, and if necessary spend another evening in its decision. The evidence on which I have asked the amendment of these resolutions, I have hastily put together, not in any logical order, but I would like to read them.

"Practical Hygiene," Coplin and Bevan, p. 147: "It is claimed that a positive diagnosis of tuberculosis can be made by subcutaneous injection of tuberculin; healthful animals offering no reaction to the reagent, while a marked hectic development occurs in tuberculous animals. There are no objections to its use, as it is believed to be innocuous in non-tubercular animals."

Idem, p. 146: "In cases where the progress of the affection is rapid, the milk is of poor quality, and often the daily yield is much diminished. Tubercle bacilli can always be detected in the milk when the udder is affected with the disease and, moreover, the bacilli have been found in milk when, after the necropsy, no tubercular lesion could be demonstrated in the organ. However slight may be the lesion, *this fact is amply sufficient to condemn, as food, all milk from tubercular animals.* Tuberculosis of the udder, when not complicated with infection by pyogenic organisms, always pursues a chronic course, and so insidious is its progress that were it not for concomitant symptoms it would never be suspected. In such instances, the quantity and quality of the milk will depend upon the constitutional effects of the disease. In the beginning of the disease the yield of milk is undiminished, but if the disease steadily advances, it gradually becomes less and less until finally it ceases. *Under no circumstances should any part of the carcasses of tubercular animals be used for food.*"

I will now read an extract from a report of Dr. Peter H. Bryce, the Secretary of the Provincial Board of Health of Ontario, a man who has given as much attention to this subject, and is as qualified to speak thereon as any man in the United States or Canada.

"Am. Public Health Association," Vol. xvii., p. 147: "In 1890, of all the cattle slaughtered in Berlin, 4.5 per cent. were tuberculous; while in Upper Silesia, 9.5 per cent. of all slaughtered in a single abattoir were tuberculous. Bitter affirms that, while statistics are not extant, there are, he has reason to believe, at least ten per cent. of dairy cattle tuberculous in cities and their environs."

Idem, p. 148: "The first and second series of experiments leave us no room for doubt that *meat taken from tuberculous cattle*, the tubercle being trimmed off without any special precautions, exactly as is done by the butcher, *is capable of causing the disease in animals which partake of it in a raw state. The further question of the degree of cooking which is necessary to destroy the infective character of the meat, has yet to be determined by experiment.*

"From Koch's first experiments, and from those of numerous investigators since, it seems to have been proven beyond doubt that tubercular nodules in the udder are a source by which the bacilli of tuberculosis are directly transmitted with the milk. This point seems to be settled as definitely as that flesh with tuberculous matter is infectious. That this danger is a serious one is seen from German statistics already quoted, and from other data where, as in Edinburgh, of *660 cows, thirty-seven* had tubercular mammitis. How far milk from tuberculous cows with no tuberculous nodules of the udder is tuberculous (as far as clinical examination goes), is a question of even greater importance than that of whether or not meat with no tubercles is capable of transmitting the disease.

"Some recent experiments in Denmark seem to show that the danger at this stage is not very great. The question, however, of at what stage the milk of a cow affected with progressive tuberculosis becomes dangerous, or infected with the bacilli, is one of such paramount importance that it is one which we may very properly consider. The following are the most recent conclusions on the subject, based upon actual experiments:

"The report of the recent Paris Congress on tuberculosis does not seem to have added any special light on the subject; but the experiments carried on by Dr. Ernst, of Harvard University, seem to have been so extended and thorough as to leave no doubt as to the dangers from this source. The report states that veterinarians give instances of the infection of calves from tuberculous mothers.

"That the milk in public supplies may be dangerous has been shown by *tubercle bacilli being discovered in mixed milk in Boston*, and also from Forster's experiments, who found that tubercle bacilli may exist in milk for at least ten days."

Idem, p. 244: "In the last report of the Department of Agriculture for Great Britain, Professor Cowl, the head of that department, had not been able to settle this question from the tissues of animals whose lungs were supposed to be tuberculous. They endeavored to find out whether the meat itself was tuberculous by selecting portions of muscles which, by the aid of the microscope, were found to show neither tuberculosis nor even the presence of tubercle bacilli. They took portions of the meat and the juice of the meat, and, mixing these with bread, fed the mixtures to rabbits and guinea-pigs. The report states that at the end of three months, under two different sets of experiments, *seventy-five per cent. of the small animals became tuberculous from eating tissues in which the bacillus or germ of tuberculosis was not to be found by the microscope.* It would seem that if these conclusions be true, it would be sufficient, when an animal is found to be tuberculous on inspection, to *condemn the whole carcass*, no matter whether bacilli were found or not.

"It seems to me that if we can establish in every municipality a systematic, periodic inspection of milch-cows once a year, or once a month, as the case may be, we will practically do away with the danger of tuberculous milk supplies to our cities."

Dr. George H. Rohé, in his excellent "Text-Book on Hygiene," at page 104, says: "That the milk from cows affected with pulmonary phthisis, or suspected of having it, should not be consumed by man or other animals, and the sale of it should be strictly prohibited." (Internat. San. Congress, 1883, at Brussels.)

In "Sanitary Examination of Water and Food," by Dr. C. B. Fox, at p. 540, is the following: "The most recent investigations show that the disease known as tuberculosis in man, or an infective variety of it, consisting as it does of the deposition of tubercles in various parts of the body, especially in the lungs and mesenteric glands, is a communicable disease. That the same disease, as it exists in cattle, can be conveyed to calves, rabbits, guinea-pigs, etc., by the milk of an animal suffering from the disease, has been proved over and over again by Chauveau, Klebs, Gerlach, Leisering, Zürn, Böllinger, and others.

"Klebs asserts, that when milk has been deprived of its solid particles, the tuberculosis virus is found in the fluid portion, *that it is not destroyed by cooking*, (italics mine) and that it is all the more active as the disease has reached an advanced stage. He is of the opinion that the disease may be developed in children through the medium of the milk. Such milk is liable to excite diarrhœa and debility in children.

"Tuberculosis is a disease which is somewhat common amongst dairy cows that are shut up in towns in close, ill-ventilated, and foul cow-houses. The milk of such animals is deficient in fat, sugar, and nitrogenous elements, whilst it possesses an increased proportion of earthy matters. In these days when the filthy feeding bottle, containing its imitation of mother's milk, in the shape of cow's milk, sugar, and water and a pinch of salt, is almost universally substituted for the supply afforded by nature, can it be wondered at that there should be such an annual Herodian slaughter of innocents from diarrhœa, debility, atrophy, etc., when it is remembered that an immense quantity of the milk that supplies the bottle is derived from animals thus diseased?

"The milk of milch-cows suffering from tuberculosis should not be employed by children. The milk of all institutions occupied by the young, which are situated in his district, should be analyzed by the medical officer of health, for he should be acquainted with the condition of this 'all in one' sort of nutriment, as supplied in large quantity for the food of children."

If you will read the reports of Prof. Bartley in the publication of the Brooklyn Health Department, especially the Report for 1885, you will find that he agrees substantially with the authorities I have quoted.

In the Report of the Brooklyn Board of Health for 1887, Dr. L. T. Bell, who is also a veterinarian, at page 109, says: "Tuberculosis, while less prevalent than contagious pleuro-pneumonia, is a much more protracted and dangerous malady to the health of the people, as it may and does exist for many months in a chronic state without being detected or suspected by the owner or herdsman. In the acute form the progress of the disease is rapid, and the secretion of the milk is greatly diminished, while in chronic cases often little impression is made upon the quantity of milk, but the qualities are greatly changed and readily recognized."

The veterinarians of the United States have long been aware of the dangers of infected meat and milk.

The following resolutions on tuberculosis were presented at the twenty-sixth meeting (1887) of the U. S. Veterinary Medical

Association, by L. McLean, M.R.C.V.S., of Brooklyn, and were adopted :

"*Whereas*, we, the members of the U. S. Veterinary Medical Association, being sensible of the prevalence of bovine tuberculosis in the United States, particularly in the dairy stock of the Eastern States, it being computed that at least from ten to fifteen per cent. are so affected in one form or another, and being satisfied of its infectious and contagious character and of its identity with tuberculosis or consumption in the human family, and that it can be conveyed to others both by inoculation and ingestion, believing that a large percentage of this disease in mankind can be traced to this source;

"1. *Resolved*, that we strongly condemn the use of the milk or flesh of animals so affected in any form, as an article of diet.

"2. *Resolved*, that this Association urgently protests against the employment of empirics as meat or dairy inspectors; that such duties should be confined to duly qualified veterinarians having a comprehensive knowledge of comparative pathology.

"3. *Resolved*, that the inspection of meat can only be properly conducted at the abattoirs.

4. *Resolved*, that all dairies should be periodically visited, the cows carefully examined and their condition reported upon to the local authorities.

"5. *Resolved*, that a committee of three be appointed by the Chair to place these resolutions before the Secretary of Agriculture, so that national measures may be adopted by which this disease can be placed under the same category as contagious pleuro-pneumonia, and be similarly dealt with."

The following facts are interesting in this connection :

Carcasses of cows condemned at the slaughter-houses for tuberculosis, in Brooklyn :

1885, 32, @ 600 lbs. equals 9½ tons, or 1,920, 10 lb. roasts.

1886, 23, @ 600 lbs. equals about 7 tons.

Estimated amount of beef in each carcass, 600 lbs.

I do not know whether the Society is familiar with some recent diagnostic methods used very largely in this state and elsewhere—the hypodermic injection of tuberculin as a diagnostic test. The New York State Board of Health have already condemned 676 cows in this State, after the tuberculin test, and to show the value of that test I would like to read a very brief extract from a letter which will appear in the BROOKLYN MEDICAL JOURNAL, from one of the best known veterinarians of this country. He writes:

"I take the liberty of sending you a brief sketch of the history of the result of tuberculin as a diagnostic agent in an instance in which I was recently interested.

"The admirers of high bred Jersey cattle and scientific dairying will be sorry to learn that Mr. F. W. Hawley, the proprieter of the Pittsford Farms, of Pittsford, N. Y., has recently determined to destroy his entire herd of pedigreed animals, numbering over 160, having satisfied himself that they are tainted with tuberculosis. Mr. Hawley had his stock in the charge of local veterinarians, with instructions to make periodical examinations, report to him the existence of any contagious disease, and to isolate or slaughter any suspected animals. Desiring to be doubly certain of the healthy condition of his cattle, Mr. Hawley some time ago requested the State Board of Health that they examine his herd by the tuberculin test.

"Out of the entire herd, 120 cattle having a normal temperature not higher than 102° were tested by an injection of tuberculin, and all but twenty, five of which were cows and the rest yearlings, 'reacted,' the elevation of temperature ranging from 103° to 107°.50.

"The high percentage of cattle reacting in this instance caused the post-mortem examinations to be looked forward to with considerable interest. Seventy-two of the worst were taken to a convenient place and slaughtered and post-mortem examinations made by Dr. Curtis, of the State Board of Health, I being present in the interest of Mr. Hawley. Tubercular lesions were found in all the animals with the exception of two, in which no macroscopical evidence of tuberculosis could be detected. The majority of the animals were affected either in the mediastinal glands or mesenteric glands, only a few having pulmonary lesions of any extent, and except in two or possibly three cases the most careful physical examination would have failed to detect the lesions.

"The question that naturally presents itself is what course the State Board of Health will pursue with regard to the further testing and destroying of cattle in this State. In justice to the public they cannot allow the matter to rest at this point, the natural inference being that other herds may be as extensively involved, possibly more so. Yours truly,

L. McLean, M.R.C.V.S."

Within the last forty-eight hours I noticed a communication from Mr. Hawley to the State Board of Health, asking them to destroy the remaining sixty of his herd, who have responded to the tuberculin test, on the ground that they were affected with tuberculosis.

I desire to append to these remarks some extracts from a paper by Prof. James Law, of Cornell University, entitled "Unsuspected Poisoning by Sterilized Meat and Milk of Tuberculous Animals," published in the New York Medical Record, March 10, 1894. He says: "The professional mind, in concentrating its attention on tuberculous infection, seems to have practically overlooked the no less real, and in many cases no less dangerous, tuberculous poisoning. To elucidate this matter, let us consider that much of the toxic matter produced by the growth of the tubercle bacillus is retained in Koch's "tuberculin," which has been absolutely sterilized. What, then, is the action of tuberculin on the animal system? It produces a constitutional disorder, with elevation of the body temperature and impairment of most of the bodily functions, notably those of assimilation and secretion. This is abundantly manifested in the wasting and fever of the victim of acute tuberculosis, in which these principles are being constantly produced in large quantities. The question kept continually before the public is that of the presence or absence of the tubercle bacillus from any food-product—meat, milk, butter, or cheese—furnished by the diseased or suspected animal. The question of the presence or absence of ptomaïnes or other toxic elements which are calculated to prove hurtful or even fatal to certain members of the human race, is not for a moment considered. Hence we are met by the argument that tubercle is rare in the muscular system of cattle, and that muscle juice is inimical to the bacillus, and that therefore the muscular tissue which makes up the great mass of the dressed carcass, may as a rule be safely eaten, even though the internal organs have been affected by tubercle.

"It is this extension of the tuberculosis under the influence of the toxic products of the bacillus which raises the most important question in connection with the consumption, by man, of the flesh and dairy products of the tuberculous animals, and yet this question has been hitherto left entirely untouched by sanitarians. It has seemed enough for them that the living tubercle bacillus did not exist in the juices of the muscle nor in the milk. It would appear as if it had never occurred to them that all the soluble toxic products of this bacillus were constantly circulating in the blood and plasma that bathed the muscles and mammary glands, and that it escaped into the milk. Yet no pathologist can for a moment doubt this general diffusion of these toxic products.

"Accepting, then, as indisputable the presence of the toxins in the flesh and milk, it follows that all who eat of such flesh and milk are continually taking in small doses of tuberculin, and that in case they are already the subjects of tuberculosis, in however slight or indolent a form, this continuous accession of the poison will rouse the morbid process into greater activity and secure a dangerous extension.

"If, now, we consider the prevalence of tuberculosis in the human population, and realize that every eighth death is that of a tuberculous person, we see what a fearful risk is being run by the utilization of the meat and milk of animals so affected, even if it could be shown that as consumed the meat and milk are free from the living bacillus. Such reckless consumption of the products of tuberculous animals can only be looked on as a direct means of sealing the fate of that large proportion of the community which is already slightly affected with tuberculosis.

"The claim that the canning of tuberculous carcasses and the boiling or Pasteurizing of milk does away with every element of danger can no longer be entertained. Sterilization is not a restoration to a non-toxic condition, it does away with the possibility of infection, it is true, but it does not render the product innocuous. As a matter of fact, Koch's tuberculin has already been sterilized by heat, but this has not by any means rendered it safe and harmless. On the contrary, it invariably intensifies any existing tuberculous process and develops fever and general constitutional disorder. When tuberculin, therefore, is present in the meat and milk it can only cause these to operate in the same way on subjects that have been already infected.

"In my experience with tuberculous cows, cases have come to my knowledge in which invalids drinking the milk of such animals have suffered very obviously, and have improved after such milk has been withheld. So, too, in the case of calves sucking phthisical cows, they have done badly and proved unthrifty though they took the whole of the milk furnished by their respective nurses, and they have thriven better when weaned and put upon solid food alone. I have followed some such calves until they grew up and were slaughtered, and have made post-mortem examinations and found them bearing old calcified tubercles, pointing back to the time when they sucked the infected and poisonous milk.

"It is idle to say that such milk was merely lacking in nutritive principles: the calves in question had access to other food while following their nurses, and would not have been harmed by taking the same amount of pure water as they did of milk. Apart from the bacilli, which operate slowly, and which allowed these animals to live for years and even to thrive after they had taken the milk, there was unquestionably in this secretion a definite poison which undermined the health and stimulated the progress of the tubercle. Accessions of bacilli are not denied, but at the worst these acted tardily, and apart from the soluble poisons their action must have been cumulative up to the cessation of the milk-feeding, so that immediately after the withdrawal of the milk the morbid action should have been greater than at any time before this, whereas, in the cases in question improvement dated from the change to dry, coarse food.

"It may then be held, as proved by analogy, observation, and experiment that the soluble poisons of tuberculosis invariably operate by exaggerating any existing tuberculous process, and that blood and all animal fluids becoming charged with such poisons uniformly tend to endanger the health, or even the life, of any consumer who is affected with tuberculosis.

"We may freely allow that the transmission of the bacillus from man to man is far more common than from beast to man. But though the implanted seed may have been in many cases derived from a fellow-man, its subsequent destructive career may be due far more to the constant accessions of the soluble toxic products conveyed in the meat and milk of tuberculous animals. Without these continuous doses of the soluble poisons the implanted germ would in many cases have proved comparatively harmless. Although it could be proved in regard to many cases that the cow had not contributed the seed of the disease, she is left little less responsible for the destructive progress and fatal result. The germ which might have remained comparatively dormant and harmless in the absence of the poisoned meat and milk, is by these stimulated to a more deadly energy.

"This hitherto unchallenged factor in the progress of tuberculosis opens up new and uncultivated fields for sanitary work. The great evil ventilated in this paper cannot be effectually met without the eradication of tuberculosis from every herd kept for the supply of food products for the public. Nothing short of this can be trusted to operate satisfactorily in putting a check upon the present fearful mortality from this disease. No inspection of dressed carcasses, nor of milk, butter, and cheese will furnish a guarantee. We must go to the herds and subject them animal by animal to a critical test, and only accept the products as safe when there is no longer a shadow of suspicion remaining. A professional examination of a most searching kind must be supplemented by the tuberculin test before a clean bill of health can be furnished.

"Often when cattle were condemned by the tuberculin test have the owners pronounced them the most thrifty and the least suspected in the herd, and it was only after slaughter, when the bodies were opened and the caseated tubercles exposed, that they were satisfied that no mistake had been made.

"Recently in a herd kept for the supply of milk of guaranteed soundness, the stock having been subjected to weekly examinations by a veterinarian, the tuberculin test was applied, and fifty per cent. of the herd demonstrated to be tuberculous.

"Without the tuberculin test there is no guarantee possible for the products of the dairy, and the sanitary officers who will affect to deal with this disease in herds without the aid of tuberculin are at best but pruning the tips of the branches of the evil tree. Public money ought not to be thrown away on such fruitless and ineffective work.

"The purification of a herd must be followed in every case by a thorough disinfection of contaminated buildings and places, and by a careful seclusion from new sources of infection. It is evident, therefore, that the non-tuberculous herd must be secured against the addition of fresh animals from any herd that has not been similarly attested sound, and that any necessary addition from another source must be tested by tuberculin before it is added to the herd.

"Equally important is it to test all farm animals of whatever species which live on the place and cohabit with the herd, and to see to it that no human being suffering from tuberculosis is allowed to attend on the animals or to prepare their food. It is difficult to see how anything short of such a system can afford a guarantee of the absence of the soluble tubercle poisons from our milk, butter, and cheese.

"In the case of butcher meats a professional examination when slaughtered, covering all of the viscera as well as the carcass, will be essential, and the current doctrine of sound meat with localized tuberculosis must be abandoned. Every municipality must have its own public abattoir in which alone its meat supplies should be butchered, and where every carcass should be systematically examined as it is opened. Private slaughter houses controlled by individual owners afford endless opportunities for the evasion of sanitary statutes, and ought to be abandoned as relics of an age when modern sanitary science was unknown.

"The question of dressed, canned, and salted meats is one that must be carefully considered. It is quite evident that such products must come to us with a sufficient guarantee, if allowed to compete with our own house meats which have passed the municipal inspection. It is equally evident that no inspector paid by the packer or canner can furnish a certificate which will command public confidence. The inspector must be a government official, who is entirely independent of the packers and who is in no way dependent on their good will.

"On the medical side it will be argued that if the toxins in the meat and milk were as injurious as they are represented, we would see the evil results on every side, and that medical men would be universally cognizant of them. And yet do we not see clearly to-day much that was never suspected twenty, thirty, or fifty years ago? How recent is the acceptance by the profession of the doctrine of contagion in tuberculosis, in tetanus, in pneumonia, in influenza, in glanders, etc. Are we to suppose that our forefathers were surrounded by fewer evidences of contagion at a time when no precautions were taken to prevent it, than we are with all the antiseptic and antizymotic provisions of the present day? The facts of contagion were doubtless more abundant in their days than in these, but their attention had never been drawn to them. So now let the attention of physicians and sanitarians be given to the morbid action of the soluble poisons of tubercle, and evidence of their evil results will accumulate on all sides. It is the scrutiny and not the facts that are wanting.

"The economist will object to drastic measures for the suppression of tuberculosis on the ground of expense. Who is to pay for the municipal abattoirs, the inspectorships, the disinfections, and the indemnities for slaughtered animals? In return let us ask, Who now pays for the constant losses of live stock which the proposed system would put a stop to? for the frequent infection of sound herds by unfortunate purchases of animals that prove to be tuberculous? for the losses to the nation, the community, and family of the tuberculous one-eighth of all deaths? for the loss of work—literary, scientific, manufacturing, commercial, domestic, and manual—of the great host of consumptives waiting all over the land to fill the places of this fatal eighth in coming mortality statistics? for the losses represented by the bills of the physician, nurse, and druggist for these invalids? and for the losses represented by the countless migrations and exiles in search of health, and of the costly consumption hospitals and sanitaria? And who is to pay in the future for the endless harvest of similar fruits, which the seeds now sown through our supineness must inevitably produce in coming generations?

"Is it not a truer economy to destroy the seed before it has germinated, or even before it has been sown, than to wait for the multitudinous evils that must attend on his growth and fructification.

"Our State Board of Health, which has charge of tuberculosis, not in man only, but in cattle and other animals as well, should take this matter up earnestly. A year ago the Board was very apprehensive of evil results from the use of tuberculin as a means of diagnosis, and only reluctantly allowed me to use the agent, in examinations I made for it, on condition that I would personally bear the full responsibility for all untoward results. This I could afford to do, being well assured from past experience how trustworthy this agent is, and how impossible it is to speedily eradicate tuberculosis from a herd without its aid.

"Now that our excellent Board has reached a similar confidence, let me urge it to go a step farther, to accept the logical deduction of its present position, the doctrine of the presence of the toxic products in both meat and milk of the tuberculous animal, and the pathogenic action of these on the infected human consumer. Let our Health Board urge on the Legislature the necessity of providing means for the purification of our dairy herds, and municipal abattoirs where all our meats shall be killed, and where all animals designed for butcher meat shall be scrutinized by professional government inspectors."

BROOKLYN PATHOLOGICAL SOCIETY.

The 354th regular meeting of the Brooklyn Pathological Society was called to order February 8, 1894, promptly at 8.30 P. M. The new President, Wm. Nathan Belcher, M.D., in the chair.

The President's message to the Society gave a history of the Society from its commencement, and reviewed the labors and struggles of the pathologist during the intervening years up to the present triumphant position which he occupies in the medical profession.

It also clearly defined the object and work of the Society, setting forth the advantages to be gained by membership in the Society and attendance upon its meetings.

Dr. Van Cott presented, 1st, a heart showing myocarditis, one cusp of mitral valve ripped out; 2nd, a large white kidney, the seat of amyloid degeneration, and a tubercular kidney with caseous degeneration, both from same case.

Ureter from tubercular kidney (the right one) was occluded to within three inches of bladder. The left one, the large, white kidney, which proved to be the only one carrying on its function, had been diagnosed to be tubercular and an operation for its removal determined upon, supposing from cystoscopic examination that both ureters were normal and that the other kidney, which was not enlarged, was normal. The death of the patient before an operation could be done saved unpleasant complication. No specialist could have determined the condition of the right kidney under the circumstances.

The specimens were discussed by Drs. Stuart, Wunderlich, De Forrest, Clayland and Warbasse.

Dr. Warbasse presented a case of post-peritoneal abscess and ulcer of the duodenum, with some fine colored drawings of the specimen.

Also a specimen of ectopic gestation, operated upon by Dr. Lewis S. Pilcher.

Discussion by Drs. Van Cott and De Forrest.

The following committees were announced for the current year:

Membership: Drs. J. M. Van Cott, J. M. Clayland and John O. Polak.

Microscopic: Drs. E. H. Wilson, F. W. Wunderlich and F. H. Stuart.

Library: Drs. S. E. Jelliffe, J. P. Warbasse and J. C. Shaw.

The 355th regular meeting was held Thursday evening, March 8, 1894. The President, W. N. Belcher, M.D., in the chair.

Dr. J. P. Warbasse read a paper upon "Strangulated Umbilical Hernia."

DISCUSSION.

Dr. Van Cott: I believe these cases die not so much from necrosis of the intestine, as from the fact that a section of intestine has been subjected to compression, the subsequent inflammation allowing the migration of microörganisms to take place more readily, and the sequelæ attendant upon such migration.

Experiments and control-experiments upon animals show this to be true.

A number of animals are laparotomied. One set have corks tied to intestines in such a manner as to cause compression; the other set without corks. Later the corks are removed and both sets are inoculated with a staphylococcus culture, and the migration of the staphylococcus is shown to take place very much more rapidly in those which have had the intestine subjected to the cork pressure.

Dr. Pilcher: A better classification of conditions of umbilical hernia should be made before we should state that all varieties should be subjected to operation for radical cure.

Dr. Pilcher presented the trachea, œsophagus and stomach removed at an autopsy, with the following history: A man sixty years old was suffering one year ago from inability to respire. Tracheotomy was performed and he breathed through the cannula until he died. Early in the present winter he experienced difficulty in swallowing, part of the food entering the trachea and then coughed up through the cannula.

This continued until all the food entered the trachea, and it became necessary to feed the patient in some other way. An attempt was made to use the stomach tube, but the family physician was unable to introduce it.

Dr. Pilcher was called in and succeeded in passing the tube into the stomach, and poured in a pint or more of fluid food. The nurse and physician were both unable to reintroduce the tube, and nutrient enemata were given for two or three weeks.

Dr. Pilcher was again called in and attempted to introduce the tube, when it was arrested, and coughing sent air up through the tube. He supposed a growth in œsophagus stopped the tube from going further, and advised gastrostomy. The patient entered the hospital for that purpose, with a temperature of 102° F., pneumonic points in both lungs evidently of septic origin. Operation was proceeded with and a valvular opening made in wall of stomach.

Immediately after the introduction of the tube through this opening four or five ounces of food were introduced. The patient stood the operation pretty well; no special shock. Respiration increased, began to fail and patient died of respiratory failure six hours after operation. Autopsy showed destruction of greater part of the larynx by ulcerative perichondritis. The posterior wall of the pharynx and the larynx were agglutinated by inflammatory adhesions, and at a point of necrosis of the anterior thyroid cartilage was an opening into the œsophagus, and was the only opening into it.

The perichondritis was either of tubercular or specific origin, with adhesive inflammation before progressive ulceration occurred; later the ulceration, perforation and subsequent advance of the disease.

The specimen is of interest not only on account of the changes in structures, but also from the surgeon's standpoint with reference to the oblique valvular canal in the stomach caused by this operation.

The tube is usually left in for a week when first introduced, then reintroduced only when desirous of feeding the patient.

DISCUSSION.

Dr. Van Cott thought that the ulceration and destructive process were due to syphilis, and the pneumonia a "foreign-body" pneumonia, and if the lung had been taken out and hardened, and sections made from it, examination would have shown food particles and infectious bacteria.

Dr. Van Cott presented a specimen of carcinoma uteri obtained from Dr. Skene's Clinic at the L. I. C. H.

The patient was fifty-two years old; curettings examined showed first only adenomatous degeneration of endometrium. The curetting was preceded and followed by metrorrhagia, and curetting was done a second time, instead of hysterectomy as advised by Dr. Van Cott. The second curetting showed distinctly carcinomatous degeneration, and hysterectomy was advised to be done at once. This was done ten days later. The specimen shows that the perimetrium had not yet been invaded, but there were two hyperæmic spots showing possibility of invasion shortly if it had been left. This is another case added to those which tend to become carcinomatous and render the advice of a pathologist of exceeding value.

DISCUSSION.

Dr. Pilcher: As a surgeon I recognize the value of a pathologist's opinion in these cases. With reference to early operation the ground is still debatable.

Take a case presenting recurrent metrorrhagia: Do all cases become carcinomatous? Are we justifiable in insisting upon hysterectomy after the first curetting? Do not many cases after several curettings entirely recover?

What proportion of these cases of tendency to adenoma resist ordinary treatment and become carcinomatous?

Dr. Belcher: If after repeated curetting the scrapings show a persistent tendency to malignant degeneration, then hysterectomy should be done at once.

The majority of cases are lost because not operated upon early enough—before the disease has become generalized.

Dr. Van Cott: I can only say that in my own experience the results of delaying operation have been very unfortunate in these cases; have repeatedly seen such cases neglected too long.

Dr. Warbasse: This case shows the fact that very often so-called benign growths suddenly become malignant, "epithelial cells running riot." Operate early and so eradicate any so-called benign growths.

Degeneration in organization is the real danger. I should like to ask if the same rule should not also be applied to adenoma of breast?

Dr. Van Cott: I have a case in hand of an encapsuled adenoma of breast; removed capsule and all. So far no recurrence, but if it had been left a little longer it certainly would have gone beyond its capsule and then become carcinomatous and the axillary glands become involved.

I think all benign growths tend to undergo retrograde degeneration.

Dr. Seymour presented the heart and kidneys from a case with the following history: A man aged fifty-eight had been addicted to alcoholics, had been on a debauch and was in a coma for four or five days; recovered, went on another debauch, was comatose three days, lying on his left side; was taken by ambulance to hospital and died soon after admission.

Autopsy showed atheroma of mitral valve and aortic valve. The tricuspid orifice was dilated sufficiently to allow introduction of hand. Kidneys were small, hyperæmic, cirrhotic and mottled on surface. Liver fatty.

Also showed another specimen of heart, showing atheroma of aortic valves.

DISCUSSION.

Dr. Van Cott: It is a question in the first case whether the condition of the kidneys was antecedent to that of the heart, or whether the condition of the heart occurred first. Alcoholism may have induced both, though the atheroma has existed for some time.

Dr. Belcher: Usually in these cases the left side of the heart is hypertrophied, but in this case the hypertrophy seems general.

The Society then went into executive session.

FREDERIC J. SHOOP, M.D.,
Secretary.

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PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,
Professor of Obstetrics, Long Island Hospital.

TREATMENT OF RUPTURE OF THE UTERUS.

Krajewski (Nouvelles Arch. d'Obstet. et de Gyn., VIII. Année) discussing a case of rupture of the uterus during labor, lays down the following rules for treatment:

NON-INFECTIOUS CASES.

a Rupture Incomplete.—(1) Without Hæmorrhage: The rupture should be drained with iodoform gauze and the vagina plugged with the same, the uterus being controlled by a firm abdominal binder. (2) With Hæmorrhage: A firm packing of the retro-peritoneal cavity and the vagina is to be first tried. This failing, resort should be had to the extra-peritoneal incision of Bardenheuer in the fold of the groin. The retro-peritoneal cavity is then to be cleansed of clots, the bleeding vessels ligated, the cavity drained through both the vagina and the abdominal wall with iodoform gauze.

b Rupture Complete.—(1) Without Hæmorrhage: The uterus is drawn down with a volsella and put in ante- or retro-version according to the situation of the rupture. The laceration, the uterine cavity, and the vagina are then packed somewhat firmly with iodoform gauze and a tight bandage applied over the abdomen. (2) With Hæmorrhage: The case must be treated by opening the peritoneal cavity.

INFECTIOUS CASES.

a Rupture Incomplete.—(1) Without Hæmorrhage: The entire uterus should be removed by the vagina, its peritoneal covering being left intact. The cavity thus left is to be cleansed and packed with iodoform gauze. (2) With Hæmorrhage: The inguinal extra-peritoneal incision of Bardenheuer is made, the hæmorrhage controlled, and the uterus removed extra-peritoneally. Extirpation through the wound proving impracticable, it may be done through the vagina, the peritoneum being left. Drainage is practiced through the vagina and the inner end of the abdominal incision, the cavity being first disinfected. The rest of the abdominal incision is to be sutured and a gauze tamponade placed in the vagina.

b Rupture Complete.—Independently of the presence or absence of hæmorrhage, open the abdomen, cleanse the peritoneal cavity of blood and infectious material and then, whatever the seat and extent of the rupture, remove the entire uterus, close the peritoneum over the vaginal opening by suture and plug the extra-peritoneal cavity from the vaginal side. Into the vesico-rectal excavation produced by oblation of the uterus, introduce a Mikulicz sac, placing its neck in the inferior angle of the abdominal wound.

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GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

BACKWARD DISPLACEMENTS OF THE UTERUS.

Cushing (Annals of Gyn. et Pæd., September, 1893,) in an exceedingly interesting and instructive study of this topic refers to the "principal surgical measures for the relief of backward displacements which have received serious consideration," as follows:

Schultze's:—Bimanual manipulation under anæsthesia; stretching and rupture of adhesions by finger in rectum and by fingers on the abdomen.

Schuecking's:—Anteposition of uterus by bimanual manipulation, and by sound if necessary; fixation in anteflexion by ligature carried through uterine wall at fundus and forward between bladder and uterus by means of special sheathed needle.

Freund's :—Sewing utero-sacral ligaments to posterior wall of Douglas' pouch : obliteration of the pouch by aseptic adhesive inflammation by use of iodoform gauze.

Alexander-Adams :—Shortening of round ligaments at inguinal ring, or by entering roof of Nuck.

Wylie's :—Shortening round ligaments by folding each on itself and sewing the fold together.

Polk's :—Bringing slack of round ligaments together in front of the uterus and fastening one ligament to the other by suture.

Combination of Wylie's operation and ventro-fixation.

Ventro-fixation :—Fastening uterus to anterior abdominal wall by sutures.

In regard to Schultze's operation, it may be dismissed as practically obsolete.

Schuecking's method is condemned as unscientific.

Of Freund's operation it may be said that it need not be condemned in principle, but that for simple cases it is unnecessarily difficult and severe.

After discussing the Alexander operation pro and con he raises the question whether acute retroflexion is ever cured thereby and after increased experience distrusts the procedure.

CONCLUSIONS.

My conclusions are :

(1) That many cases of retroflexion, and most cases of retroversion, if uncomplicated, cause little serious disturbance, and require no operative treatment.

(2) That severe retroflexion in the virgin, when giving rise to symptoms sufficiently severe to call for treatment, is best relieved by operation.

(3) That cases of retroversion which cannot be made comfortable by simple measures, such as the use of a pessary, are usually obdurate on account of some complication which requires operation.

(4) That of the operations designed for the cure of retro-displacements, the only ones worth considering are the Alexander-Adams operation, the various methods of intra-abdominal shortening of the round ligaments, and ventro-fixation.

(5) That there is a legitimate and useful field for Alexander's operation, subject to the following limitations : The uterus must be free, the diagnosis must be exact, the anatomical conditions must be favorable.

(6) That when these conditions are not present it is better to make a median abdominal incision and act according to circumstances.

(7) That after opening the abdomen, if no complications are present, the uterus may best be secured in ante-position by shortening the round ligaments internally, and by placing at each cornu of the uterus one suture which passes through the abdominal wall.

(8) That the latter operation may properly be performed instead of that of Alexander if the surgeon prefers it, as it is equally safe and more reliable on the average.

DISEASES OF CHILDREN.

BY FRANCIS H. STUART, A.M., M.D.

Obstetrician to the Brooklyn Hospital.

PRIMARY LARYNGEAL CROUP.

E. Fränkel (Deut. med. Woch., June 16, 1892) says that the presence of membrane in the fauces frequently extending to the larynx, trachea, and bronchi is almost unanimously looked upon as true diphtheria, and as due to the Klebs-Löffler bacillus, but that there is still some question as to the nature of a primary membranous laryngitis in which the fauces are intact. Four cases of this latter affection are here recorded in which no membrane was found in the fauces by the author either before or after death. In one of the cases the child was said by the parents to have had white patches in the throat a fortnight before the fatal illness, but there was no reason to believe that this was diphtheria. Pure cultures of the true diphtheria bacillus were obtained from the membrane in all these cases. Inoculation experiments upon guinea-pigs gave rise to the symptoms and pathological appearances usually produced by this bacillus. The animal rapidly fell ill, and soon died with paralytic symptoms. Double hydrothorax, hæmorrhagic swelling of both supra-renal bodies, and slightly hæmorrhagic œdema at the site of the injection were found. The author would conclude that idiopathic membranous laryngitis is ætiologically identical with genuine faucial diphtheria. The presence of an enlarged spleen, of changes in the kidneys, and of the lymph follicles, especially in the ileum, found in these cases is also in favor of this view. There are two other affections of the air passages which, in the author's opinion, require investigation, namely, the pseudo-membrane seen in the bronchioles in acute pneumonia and the bronchial casts of plastic bronchitis. In one case of fibrinous bronchitis from a fatal case of acute pneumonia the author found by cultivation and otherwise Fränkel's pneumococcus in this exudation. (Abstracted in Epitome, Brit. Med. Journ., July 2, 1892.)

ALCOHOL: DOES BREAST-MILK CONTAIN IT AFTER INDULGENCE BY MOTHER?

Dr. F. Klingemann of Bonn (Centralblatt f. Klin. Med., 1892, p. 194), had the opportunity to test this question in three cases under his care in the Midwifery clinic. One patient, three days after confinement, drank 375 ccm. of champagne containing 12$^0/_0$ alcohol, an equivalent of 45 ccm. of pure alcohol. A few days later she took again the same amount. A second patient took 320 ccm. of old port wine, containing 18$^0/_0$ of alcohol: an equivalent of 58 ccm. of pure alcohol. The milk during the following twenty-five hours was pumped from the breasts and tested for alcohol. He found no trace of alcohol in the breast-milk in either of the three experiments. The tests were carefully conducted, and were farther controlled by different methods which would show the presence of even 0.05 $^0/_0$ of alcohol; also cow's and goat's milk to which minute quantities of alcohol were added, showed its presence by the methods employed. These experiments show that the nursing breast consumes alcohol with more energy than do the kidneys, skin or lungs.

The conclusion from these experiments is plain that so far as the infant is concerned there is no danger or objection to allowing alcoholic stimulants, as especially ales, porter, and other malt liquors to nursing mothers. This question is often anxiously asked particularly in the case of wet-nurses, whose habits of drinking malt liquors it is difficult to control.

MISCELLANEOUS.

CIRCULAR TO PHYSICIANS—DEPARTMENT OF HEALTH.

Commissioner's Office,
Brooklyn, N. Y., February 23, 1894.

Dear Doctor:

As you are probably aware, smallpox has been on the increase in this city during the last two years, notwithstanding the efforts that have been made to stamp it out.

This Department feels that it needs the active coöperation of every practising physician in the city, and, while it does not presume to instruct them, it desires to call attention to the fact of the great benefit secured by vaccination and re-vaccination. The Public Health Records of the respective countries show that in Sweden the average number of deaths in each year from smallpox for one million inhabitants was, before the introduction of vaccination (1774 to 1801), 1,973. During the period of optional vaccination (1802 to 1816), 479; and during the period of obligatory vaccination (1817 to 1877), 189.

In England, the number of deaths in each year from smallpox per one million inhabitants, was at the close of the last century 3,000; from 1841 to 1853 (average), 304; from 1854 to 1863 (average), 171.

And in other countries, according to the complete reports from official sources for 1887 and 1888, illustrating the benefit of compulsory vaccination compared with voluntary, the number of deaths from smallpox per one million inhabitants in each country named for the period has been as follows :

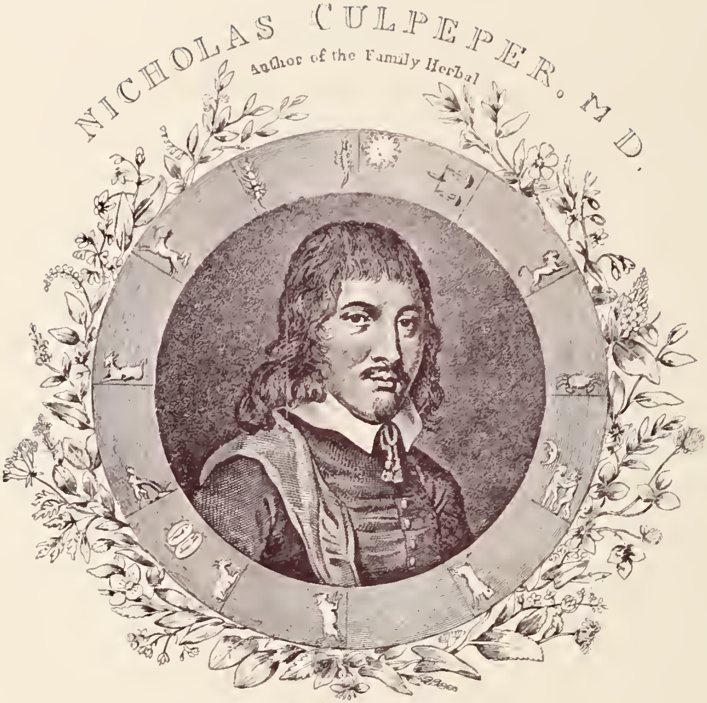
		1887	1888
Austria-Hungary,	Vaccination optional,	583.7	540.3
Russia, - - - -		535.9	231.5
France, - - - -		167.0	191.9
German Empire, -	Vaccination Compulsory.	1.8	0.8
Denmark, - - -		0.0	0.0
Sweden and Norway		0.0	0.0

The experience of this Department is that the average immunity secured by vaccination does not extend beyond five years. It is a well recognized fact that even an attack of smallpox does not necessarily protect from a recurrence of the disease, and statistics show that a second attack is apt to be more fatal than an attack after an efficient vaccination ; therefore vaccination after an attack of variola is also advised. This Department urges upon physicians the necessity of carefully scrutinizing, and early reporting, by the use of the telephone, suspicious cases ; this will secure the services of the experts of this Department at all hours.

Respectfully yours,

Z. Taylor Emery, M.D.,
Commissioner of Health.

LUGOL.


NICHOLAS CULPEPER. M.D.
Author of the Family Herbal

RED LION HOUSE, SPITALFIELDS,
In which Culpeper Lived Studied & Died

THE

BROOKLYN MEDICAL JOURNAL

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

REMARKS ON THE TEACHING OF PRACTICAL ANATOMY.

BY WM. W. BROWNING, M.D.

Read before the Medical Society of the County of Kings, September, 1893.

Although certain enthusiasts have claimed for the science of anatomy great antiquity, carrying it back to even the Homeric period, a candid examination of medical history will reveal the fact that prior to the time of Aristotle, B. C. 350, anatomical knowledge was in so crude a condition as to exclude it from the list of the sciences. The teaching was largely speculative, and founded upon dissections of the lower animals, the human body being regarded as too sacred to mutilate except for the purposes of conquest or revenge.

There is no direct evidence that Aristotle dissected the human subject, but it is known that, as the tutor and companion of Alexander, extraordinary opportunities were afforded him, and that he availed himself of them can scarcely be doubted when his remarkable enthusiasm and the truthfulness of most of his descriptions be taken into consideration.

Of Herophilus and Episistratus, who flourished fifty years later, it is first recorded that they dissected the human body, a method of investigation which continued to be practiced till the time of Galen, who, in A. D. 150, was thus enabled to give to the world a series of writings which placed anatomy among the sciences, and furnished the profession of medicine with descriptions, so far as they went, essentially the same as those contained in the text-books of the present day.

For the preservation of the medical sciences during the centuries following the fall of the Roman Empire, we are indebted to the Moslem civilization and the Arabian school. That little advance was made in anatomy is due to the fact that the Koran expressly declares it to be an act of defilement to handle the dead body. The Saracen era ended with the rise of the School of Bologna during the thirteenth century. Two centuries later we see the medical centre shifted to France. During all this period, however, supreme admiration for Galen and implicit faith in his teachings, so completely dominated the profession, that little original investigation was carried on in any of the departments of medicine.

Human dissections were revived by Andrew Vesalius, in 1560, and, during the next two centuries, followed, with practical results, by many eminent anatomists.

Practical anatomy is now universally considered an essential department of medical education, and dissecting the only proper method by which the student may familiarize himself with the appearances and relations of the various structures of the human body. The dissecting room is, therefore, a recognized department in medical colleges, and it is part of the requirements of graduation in such colleges, as well as for license to practice medicine where such matters are under State supervision, that the candidate shall have dissected every region of the body. Unfortunately, until within recent years, the popular prejudice against mutilation has interfered to a great extent with the obtaining of material for dissection. For this reason it has been impossible to conduct the dissecting room openly as other departments. It has been necessary to exercise a certain amount of secrecy and to pledge the student to its observation. Such a relation between teacher and pupil, though perhaps not preventing the acquirement of knowledge by one possessed of the proper enthusiasm, interferes with maintaining the discipline necessary in the case of the ordinary student. By long usage, customs frequently continue to govern, although the circumstances under which they became established have entirely changed, and it must be admitted that the dissecting room has not been rescued from the influences under which it grew up, though in this State, as well as in many others, the obtaining and use of material is fully regulated by law.

As important as is the art of dissecting to the gaining of a knowledge indispensable to the physician and surgeon, and as fully as this fact is admitted by practitioners of medicine, it is to be regretted that a large proportion of students look upon it as a disagreeable work to be gotten through with as quickly and easily as possible. The demonstrator of anatomy has been considered one whose taste is somewhat abnormal, and whose acquirements are of an unusual character. The student has entered his department at the very beginning of his anatomical studies and has left before he has fairly learned the use of the scalpel, principally impressed with the exceeding difficulty of the subject. The demonstrator has passed from table to table, succeeding only here and there in rescuing from a mass of mutilated tissues some important structure, or by the use of the knife demonstrating his own ability to bring order out of confusion. His certificate in the end has meant, in many instances, simply that the student has used up to the best of his ability, the material assigned to him. To have withheld it would have been an injustice, since the fault was as much the lack of system as the neglect of the student.

A reform has been instituted in the dissecting room of the Long Island College Hospital, and the success which has attended the effort warrants the description of the system in use in that institution. It is a gratifying fact that though students still, as a rule, enter the department at a time when they are but beginning their anatomical studies, they soon display a familiarity with the subject which is truly surprising.

Although the maximum number upon the dissecting list rarely has exceeded 100, nor the average attendance more than sixty per cent., the demonstrator is aided by three assistants. These have been selected as much with regard to their ability as teachers as to their knowledge of anatomy or their skill as dissectors. If the student be in attendance throughout the two hours allotted to a single session, it rarely occurs that he is unable to secure the services of a demonstrator.

Each subject is assigned to a class of six students, two upon the head and neck, two upon the arms and thorax, and two upon the lower extremities and abdomen. Though, by definite rules, one is restrained from trespassing upon the territory of another, those upon similar parts are encouraged to work in partnership, and all to observe a mutual interest in one another's dissections.

At the beginning of his special dissection, each student is furnished with a card designating the structures which he is expected to expose and exhibit to the demonstrator. Of these there are three sets, corresponding to the regions into which the body is divided by assignment. They are of uniform size, namely, about 9 x 6 inches, so that they may be preserved between the leaves of "Gray's Anatomy." In order to explain more clearly their use, fac-similes of them are here introduced.

The aim has been to call attention upon these cards to the important structures of the body, and in the order in which they may be successively exposed. The figures upon the right-hand margin number the objects to be shown for a purpose which will presently appear. Those upon the left-hand margin serve the double purpose of numbering the lines and indicating the days of the month. The reason for the double row, as well as for the line of figures across the bottom, will be explained as we proceed.

The demonstrators are provided with ordinary conductor's ticket punches, varying in design to give them individuality, with which they punch out, upon the left hand margin, the date they visit the student, and upon the right hand margin, the numbers which correspond to the names of the various structures, as they are severally exhibited and described.

The dissection of a single part rarely occupies over six weeks, so that the double line of figures upon the left of the card and the line at the bottom, furnish dates sufficient to cover the period. For instance, if the dissection commenced on the 31st of a month, the checking would go immediately on to the second column and afterward across the bottom, giving a latitude of seven weeks.

When the student is unable to exhibit anything further upon his part, he is permitted to present his card to the demonstrator, provided seventy-five per cent. of the numbers upon the right margin are checked out. This may be determined at a glance since, if true, the last number of the bottom row will exceed the number of unpunched figures upon the right-hand margin.

Cards are dated when material is assigned. The date is checked out by a special punch when the dissection is begun. When the card is presented to the demonstrator, with seventy-five per cent. checked off, the student is examined as to the re-

Sept. Oct. Nov. Dec. Jan. Feb. Mch. Apl. May.

KEEP THIS CARD.

Name . . . . *Date*

THORAX AND UPPER EXTREMITY.

The Student must expose and exhibit to the Demonstrator or his assistants, the following structures:

1 1 Fascia ; Cutaneous intercostal vessels and nerves ; (Mam- 1 2 3 4
2 2 mary gland) ; Cephalic Vein ; Pectoralis major muscle. Ext. 5 6 7
3 3 ant. thoracic nerve ; Axillary fascia ; Boundaries of axilla ; 8 9
4 4 Inter-costo-humeral nerves ; Axillary glands ; Pectoralis 10 11 12
5 5 minor m. ; Int. ant. thoracic nerve ; Axillary vessels ; 13 14
6 6 Branches of Axillary artery. Dorsalis scapulæ a. ; Posterior 15 16 17
7 7 thoracic nerve ; Brachial plexus ; cords ; divisions ; M. Sub- 18 19 20 21
8 8 clavius ; Costo-coracoid membrane ; Coraco-clavicular liga- 22 23
9 9 ments ; Latissimus dorsi, Teres major, Subscapularis, Ser- 24 25 26 27
10 10 ratus magnus m. ; Cutaneous nerves of arm ; Superficial veins 28 29
11 11 in front of elbow : Basilic vein ; Brachial artery ; Distribution 30 31 32
12 12 of Brachial plexus ; Biceps, Coraco-brachialis, Brachialis 33 34 35
13 13 anticus and Deltoid m. ; Branches of Brachial artery ; Bifur- 36 37 38
14 14 cation ; Median nerve ; Muscles of front of the forearm ; Palmar 39 40 41
15 15 fascia ; Muscles of palm ; Insertion of flexor tendons. 42 43
16 16 Ulnar artery and branches ; Distribution of Ulnar and 44 45 46
17 17 Median nerves ; Anterior interosseous artery. Superficial 47 48 49
18 18 and deep palmar arches ; M. Triangularis sterni ; Internal 50 51 52
19 19 mammary artery ; Phrenic nerve ; Pericardium ; Arch of 53 54 55
20 20 aorta ; Innominate artery and veins ; Pulmonary artery and 56 57 58
21 21 veins ; Heart ; Coronary arteries and sinus ; Cavities and 59 60 61 62
22 22 valves of Heart. Lung : root, border, apex, base ; Mediastina ; 63 64 65
23 23 Œsophagus ; Venæ cavæ ; Thoracic duct ; Pneumogastric 66 67 68 69
24 24 and Sympathetic nerves. Intercostal muscles ; Trapezius ; 70 71 72
25 25 Muscles of Scapula ; Muscles of 4th layer of back ; M. Triceps ; 73 74 75
26 26 Musculo-spiral nerve ; Muscles of back of forearm ; Muscles of 76 77 78
27 27 back of hand ; Radial artery and divisions ; Musculo-spiral 79 80 81
28 28 nerve ; its divisions and its distribution ; Ligaments of the 82 83
29 29 shoulder and elbow-joints. 84
30 30 **All anomalies must be noted on the back of this card.**
31 31

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Sept. Oct. Nov. Dec. Jan. Feb. Mch. Apl. May.

KEEP THIS CARD.

Name *Date*

ABDOMEN AND LOWER EXTREMITY.

The Student must expose and exhibit to the Demonstrator or his assistants, the following structures:

1 1 Fascia of the Abdomen (two layers): Superficial abdominal 1 2 3
2 2 vessels and nerves; M. Obliquus ext.; Inguinal rings; Parts 4 5 6 7
3 3 concerned in Inguinal hernia: M. Obliquus int.: Scrotum: 8 9
4 4 Testes: Penis; or Labia; Vestibule; Clitoris; Sheath of Rectus 10 11 12 13
5 5 muscle: Lineæ transversales, semilunares and linea alba; M. 14 15 16 17
6 6 Rectus abdominis; Deep epigastric artery; Hesselbach's 18 19
7 7 triangle; Remains of Urachus and Hypogastric arteries. Peri- 20 21 22
8 8 toneum; reflections; greater and lesser cavities; omenta; Fora- 23 24 25 26
9 9 men of Winslow; Abdominal and pelvic viscera; Abdominal aorta 27 28 29
10 10 and branches; Cœliac axis and branches; Mesenteric arteries 30 31 32
11 11 and distribution; Receptaculum chyli; Iliac arteries and 33 34
12 12 branches *within* the pelvis; M. Psoas; M. Iliacus; Origin of 35 36 37
13 13 Lumbar and Sacral plexuses; Superficial fascia of thigh, and 38 39 40
14 14 cutaneous vessels and nerves; Cribriform fascia; Saphena 41 42 43 44
15 15 vein: Fascia lata; falciform process; Saphenous opening: 45 46 47
16 16 Femoral sheath; Coverings of femoral hernia; Scarpa's 48 49 50
17 17 triangle; Gimbernat's ligament; Distribution of Lumbar 51 52
18 18 plexus; Femoral artery and branches; Profunda artery and 53 54 55
19 19 branches: Tensor vaginæ femoris and Sartorius m.; Quadriceps 56 57 58 59
20 20 extensor and adductor muscles; Pectineus and Gracilis m.; Ob- 60 61 62 63
21 21 turator nerve and branches: Hunter's canal; Muscles of front 64 65 66
22 22 of leg; Anterior tibial artery and nerve, and branches; 67 68 69
23 23 Muscles of dorsum of foot; Peroneal muscles; Musculo- 70 71 72
24 24 cutaneous nerve; Glutei muscles; External rotator muscles; 73 74
25 25 Sciatic Foramina; Terminal branches of Int. Iliac artery; 75 76
26 26 Branches of Sacral plexus; Popliteal space; boundaries and 77 78 79
27 27 contents; Hamstring muscles; Muscles of back of leg; Pos- 80 81 82
28 28 terior tibial artery and nerve; Peroneal artery; Muscles of 83 84 85 86
29 29 plantar surface of foot; Plantar arteries and nerves; Plantar 87 88 89
30 30 arch: Ligaments of hip, knee and ankle joints. 90 91 92
31 31 **All anomalies must be noted on the back of this card.**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Sept. Oct. Nov. Dec. Jan. Feb. Mch. Apl. May.

KEEP THIS CARD.

Name ______ *Date* ______

HEAD AND NECK.

1 1 **The Student must expose and exhibit to the Demonstrator**
2 2 **or his assistants, the following structures :**

3 3 Scalp ; Vessels and nerves of scalp and supra-orbital region ; 1 2 3 4
4 4 M. Occipito-frontalis ; M. Orbicularis palpebrarum ; Temporal 5 6 7
5 5 fascia ; Dura mater ; Membranes and sinuses of brain ; Exit of 8 9 10 11
6 6 nerves; Muscles of expression; of the eye; Buccinator; Trans- 12 13 14 15
7 7 verse facial a.; Parotid gland; Socia parotidis; Steno's duct; Pes 16 17 18 19
8 8 anserinus ; Facial nerve ; Infra orbital nerve ; Temporal and 20 21 22
9 9 Masseter m.; Facial artery; Posterior auricular artery ; Ptery- 23 24 25 26
10 10 goid muscles ; Internal maxillary artery ; Inferior maxillary 27 28
11 11 nerve ; M. Platysma myoides ; Ext. jugular vein ; Superficial 29 30 31
12 12 cervical nerves ; deep cervical fascia ; M. sterno-mastoideus ; 32 33
13 13 Spinal accessory nerve ; Boundaries and contents of the surgical 34 35 36
14 14 triangles of the neck ; Sterno-hyoid, Sterno-thyroid, Omo-hyoid 37 38 39
15 15 and Thyro-hyoid m. ; Common carotid artery; bifurcation; Ext. 40 41 42 43
16 16 carotid artery; Branches of External carotid artery ; Int. Jug- 44 45
17 17 ular vein ; Descendens and Communicans noni nerves ; Thy- 46 47 48
18 18 roid body ; Submaxillary gland ; Hypoglossal nerve ; Lingual 49 50 51
19 19 artery ; Digastric, Stylo-hyoid, Mylo-hyoid and Hyo-glossus, 52 53 54 55
20 20 m.; Cervical plexus ; Phrenic, Pneumogastric and Sympathetic 56 57 58 59
21 21 nerves; Subclavian artery and vein; branches ; Recurrent lar- 60 61 62 63
22 22 yngeal nerve ; Origin of Brachial plexus ; Vertebral artery ; 64 65
23 23 Scaleni muscles ; Muscles of tongue and pharynx ; Epiglottis 66 67 68 69
24 24 Thyroid cartilage and cricoid cartilage ; Trachea ; Œsophagus ; 70 71 72 73
25 25 Trapezius, Splenius capitis et colli, Levator anguli scapulæ, 74 75 76
26 26 Complexus, Obliqui, Recti capitis and Trachelo-mastoid, m. 77 78 79 80
27 27 **All anomalies must be noted on the back of this card.**
28 28
29 29
30 30
31 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

maining points, and if the examination proves satisfactory, these are checked off with a punch used for that especial purpose.

Upon the reverse of the cards are printed the rules of the dissecting room, sufficient space being left to note anomalies of importance enough to deserve special attention. When filed they serve as a record of the nature of the work done by the student, the period of time taken to complete it, the dates of his attendance, the service rendered him by the several demonstrators, and the important anomalies found upon his subject.

Although unsurpassed as a text-book, "Gray's Anatomy" is of little use in the dissecting room, except as a work of reference. A dissecting manual or guide is almost a necessity. In spite of the constant emphasis laid upon this fact, most students continue, probably to escape the extra expense, to rely upon their "Gray." A partial solution of the difficulty has been brought about by the adoption of our card system. The card serves to direct the order of the dissection, and for a description of the structures and the methods to be pursued in their exposure, any standard work upon descriptive anatomy is sufficient. Though unforseen, it has been observed as an evolution of our system, that most of the cards, when returned, have written over the names of the various structures, numbers corresponding to the pages in Gray where they are described.

That a revolution has been wrought in our department is evidenced by the fact, that whereas formerly only the most diligent and enthusiastic sought the services of the demonstrators, now they are in constant demand by the very class who most need their guidance and instruction. In order to create additional interest as well as to stimulate ambition to excel and reward diligence in this important branch of medical education, a fund of $1,000 has recently been established at the Long Island College Hospital, the interest of which, to be known as the Corydon L. Ford Prize, is to be given to that member of the graduating class who, having taken his entire course of practical anatomy at that Institution, has made the best dissections.

Through the enterprise of the Regents of the Hospital, the College has been furnished with a dissecting room of ample dimensions and improved facilities. The tables are of slate, the floors of asphalt, and the water supply abundant. Through the generosity of friends interested in our science, the department has been furnished with a refrigerator of a capacity of twenty bodies. As they are received, bodies are identified, embalmed and preserved till such time as they may be needed. During their dissection the parts removed are preserved separately and at the end placed in the coffins in which they arrived. A most careful record is kept of the name, age, date and place of death of each person, and the time of his dissection, the students by whom the dissection was made, and the date of burial.

It has never been disputed that a knowledge of the structures of the human body is of great importance to the physician, while ignorance of their relations is considered a complete disqualification for the surgeon. But an era has arrived in the history of medicine when familiarity with anatomical detail is essential to a proper understanding of the causes and treatment of most diseases, whether surgical or otherwise. That it is most difficult to master and quite readily forgotten is freely admitted, but though it is not unusual to hear members of our learned profession most shamefully boast of their deficiencies in this regard, there are few better methods of measuring the capacity of the doctor, roughly, than by the yardstick of his knowledge of anatomy.

How, then, shall this knowledge best be fixed in the student mind, if not by the object teaching of dissecting, and that, too, during the time when the practical facts of medicine are being brought to his attention. Descriptive anatomy may be considered a preliminary branch, but practical anatomy should be classed in the same grade with practical medicine and operative surgery. To permit a student to enter upon this work at the very beginning of his medical course is a waste of material, a waste of time and a waste of energy. There is a department of descriptive anatomy, namely, the study of the framework of the body, which lies at the foundation of all else, and which cannot with advantage be studied in the dissecting-room. No student should be permitted to enter upon his dissecting until he has passed a proper examination in osteology. Again, if this department is of a practical nature, why not make its work thorough? The requirement that the student shall dissect every region of the body, is not, in actual fact, fulfilled by his dissecting half the body, since the two sides are not symmetrical throughout, while the argument that he would thus be compelled to go over much of the same work twice is more than met by the assertion that to obtain the best results, a certain amount of skill must be acquired, and in its acquirement many tissues are of necessity sacrificed. Difficulty in obtaining material and its cost have ceased to exist as reasons for economy in its use. and as against the importance of the knowledge to be obtained by dissecting, the disagreeableness of the task should not weigh for a moment.

To bring about these reforms the moral support of the profession must be had; it is, therefore, with pleasure, that this opportunity offered by the President to lay these facts and suggestions before the Society has been accepted.

Following is an abstract of § 207 of Chap. 661 of the Laws of the State of New York, passed May 9, 1893, by authority of which material for dissection is obtained:

"The persons having lawful control and management of any hospital, prison, asylum, morgue, or other receptacle for corpses not interred, and every undertaker or other person having in his lawful possession any such corpse for keeping or burial, may deliver and he is required to deliver, under the conditions specified in this section, every such corpse in their or his possession, charge, custody or control, not placed therein by relatives or friends in the usual manner for keeping or burial, to the medical colleges of the State authorized by law to confer the degree of doctor of medicine and to any university of the State having a medical preparatory course of instruction, and the professors and teachers in every such college or university may receive any such corpse and use it for the purpose of medical study. No corpse shall be so delivered or received if desired for interment by relatives or friends within forty-eight hours after death, or if known to have relatives or friends, without the assent of such relatives or friends; or of a person who shall have expressed a desire in his last illness that his body be interred, but the same shall be buried in the usual manner. If the remains of any person so delivered or received shall be subsequently claimed by any relative or friend, they shall be given up to such relative or friend for interment. Any person claiming any corpse or remains for interment as provided in this section, may be required by the persons, college, university or officer or agent thereof, in whose possession, charge or custody, the same may be, to present an affidavit stating that he is such relative or friend, and the facts and circumstances upon which the claim that he is such relative or friend is based, the expense of which affidavit shall be paid by the persons requiring it. If such person shall refuse to make such affidavit, such corpse or remains shall not be delivered to him but he shall forfeit his claim and right to the same. Any such medical college or university desiring to avail itself of the provisions of this section shall notify such persons having the control and management of the institutions and places heretofore specified, and such undertakers and other persons having any such corpse in their possession, custody or control in the county where such college or university is situated, and in any adjoining county in which no medical college is situated, of such desire, and thereafter all such persons shall notify the proper officers of such college or university whenever there is any corpse in their possession, custody or control, which may be delivered to a medical college or university under this section, and shall deliver the same to such college or university. If two or more medical colleges located in one county are entitled to receive corpses from the same county or adjoining counties, they shall receive the same in proportion to the number of matriculated students in each college. The professors and teachers in every college or university receiving any corpse under this section shall dispose of the remains thereof, after they have served the purposes of medical science and study, in accordance with the regulations of the local board of health where the college or university is situated. Every person neglecting to comply with or violating any provision of this section, shall forfeit to the local board of health where such non-compliance or violation occurred, the sum of twenty-five dollars for every such non-compliance or violation, to be sued for by the health officer of such place, and when recovered to be paid over, less the costs and expenses of the action, to such board for its use and benefit."

DISCUSSION.

Dr. Eliza M. Mosher: Dr. Browning's method, as described, seems to me to be an admirable one, and I especially approve of it, because it looks toward making the course in practical anatomy a longer and more systematic one. There are so many things which there is no time for in the short course prescribed in the past; for instance, too little attention has been given to the mechanics of the body, so to speak; to a study upon the cadaver, of the way in which muscles and groups of muscles, aid or antagonize each other in making complex movements; the varying direction of internal pressure due to muscular movement, gravitation, etc., and the regions most liable to overstrain.

If it were not necessary to make one dissection cover so much ground, surgical anatomy could be better taught than it is now in most American schools—a result greatly to be desired we must all admit.

Dr. Smith: Mr. President: I have listened to the reading of the address of Dr. Browning with very considerable interest, because it is well calculated to direct our attention to the more practical methods properly applied in our investigations and studies, and particularly the study of this very practical subject of anatomy. In my judgment it is a hopeful sign to see those placed in authority as teachers taking such practical methods as those here presented by Dr. Browning, to select from the great and often confusing mass of verbose matter contained in our text-books more practical and systematic methods to accomplish practical results. This, I am glad to say, does not exist to so great a degree in our text-books on anatomy as in most of the other branches of medical studies. We have Hodge's "Dissector," and other similar and more condensed works than that of Gray, but for my use they have not seemed to be sufficiently descriptive and explicit enough for the thoroughly practical student for his use in the dissecting room. The same may truthfully be said against our method of the application of remedies to the treatment of diseased conditions of the system, and perturbations of the systemic vitality. For one I am much pleased to know that during the past ten or fifteen years, there has been a great deal done in this latter direction, and there is great encouragement that one may now have a more practical and encouraging method in general use in the study of this very essential part of our art.

Dr. H. Wallace: Mr. President: No medical man can fail to appreciate the great benefits to be derived from Dr. Browning's methods of teaching practical anatomy. I regret that his admirable system was not in practice during my student days at the Long Island College Hospital. There are two ideas that are brought to my mind by the remarks of the preceding speaker (Dr. E. M. Mosher) and by the paper of the evening. One is the too infrequent use of the living subject for the anatomical instruction; the other, the want of more extensive instruction in regional or surgical anatomy.

The study of anatomy is a difficult one, and, to a great proportion of medical students, a dry one. I believe that if more attention were paid to anatomy as related to surgery, much good would accrue by exciting a more practical interest among students. I believe, too, that a well-developed living subject should be considered as much a necessity by every anatomical instructor as the ever present skeleton and cadaver. The use of the living model is warmly advocated by Dr. Wm. W. Keen in his edition ('87) of "Gray's Anatomy," and the practice is carried out in some schools at the present time.

Dr. Browning: I am gratified that the suggestions made have met with so general an approval, as evidenced by the remarks of those who have spoken. One of my purposes in presenting this subject was to impress upon the profession that their support is necessary if an advance is to be made along this line.

Students freely indulge criticisms of their teachers for introducing so much of what they choose to call the minor or unimportant details of anatomy, and I have frequently been led to fear that, in so doing, they have been but voicing the opinions of their preceptors. I wish to observe that it is impossible to select and teach successfully concerning structures which have a practical relation to medicine and surgery without referring to and describing, also, such as seem to be of less importance. Inasmuch as the student comes first under your influence, I urge upon you to impress upon him the great importance of this branch of medical science.

Some have spoken of class-room teaching. At some future time I may desire to give my views upon that subject also, but the bearing of the paper to-night had reference solely to anatomy as taught in the dissecting room.

A METHOD OF TREATING TRANSVERSE FRACTURE OF THE PATELLA.

BY JOHN C. SCHAPPS, M.D.,

Brooklyn, N. Y.,

Surgeon to Department of Orthopedic Surgery and Diseases of Joints, St. Mary's Hospital.

After MacEwen's investigations,[1] had shown that the cause of non-union in transverse fracture of the patella is the presence of soft tissues between the fragments, and that these tissues are commonly so entangled in the osseous irregularities of the fractured surfaces as to require, for their removal, careful scraping or dissection, surgical opinion rapidly accumulated in favor of the treatment of this fracture by open incision, clearing of the bony surfaces, and securing their apposition by means of suture of some kind. And brilliant successes were frequently so obtained. But the repeated occurrence of serious mishaps due to the operation, and the excellence of the functional results obtainable by non-operative methods eventually caused the backward swing of the pendulum, and now it is not expressing it too strongly to say that the operative method of treating recent fracture is generally regarded as unjustifiable. Various substitutes, such as tying the fragments together subcutaneously, or bolting them together by means of screws or drills subcutaneously introduced have been advanced. These and similar propositions necessitate invading the joint and leaving in it foreign bodies. For the crevice between the fragments is clinically a part of the joint cavity. Thus, while involving all or nearly all the risks of the operation they are intended to supersede, they do not attempt the only procedure which makes the latter justifiable—that of clearing the fractured surfaces This not being attempted, there remains to be secured such more or less complete approximation of the bony surfaces as the absence or presence of tendinous structure may permit. To accomplish this it is not necessary to enter the joint nor even to puncture the skin, except to relieve joint effusion when present.

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[1] Annals of Surgery, March, 1887.

Without enumerating the various external methods commonly used for treating this fracture, and criticising them in detail, it may be stated that they appear generally defective in one or more of the following respects :

1. They do not utilize all available surface in the application of approximating force. Not only is the force thus restricted to what a limited area will bear, but the means of applying the force is very liable to become displaced from its limited attachment.

2. They make no provision for adjustment to the varying conditions, atrophy, absorption, etc., of the parts which are acted upon.

3. The coapting force does not oppose in the most direct manner distracting force, but acts through the intervention of objects whose relations to the fragments to be approximated are variable and uncertain. Such objects are the foot and ankle joint, the splint which is applied to the limb, or even the bedstead upon which the patient lies.

The method here described was used in a case treated during the summer of 1885. The ultimate result was a separation of about $^3/_4$ inch and a practically perfect limb. The procedure was simply a combination of the expedients which constitute to great extent the orthopedic surgeon's mechanical pharmacopœia—removal of effusion, traction, fixation, and limitation of articular motion.

Two pieces of stout extension plaster were cut into right-angled triangles, A B C and A′ B′ C′, so that the warp ran in the direction of the hypothenuse, B C, B′ C′. The distance A B, A′ B′ is about one-third of the upper circumference of the thigh, and A C, A′ C′ is the length of the inner aspect of the thigh. The plaster was cut three inches longer than it appears in the figure, in order, by doubling it twice, to strengthen it sufficiently to hold the buckle sewn in. In cases of doubt it is safer to reinforce by the folding in of an additional piece. The triangles were divided longitudinally, as shown by the dotted lines, into three tongues, and were applied so that the buckles were situated over the condyles, while the two sets of tongues interlaced on the front

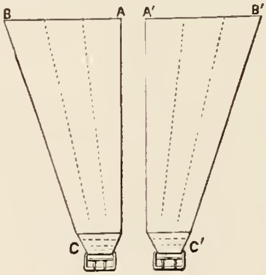

FIG. 1.

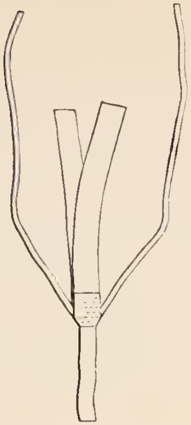

FIG. 2.

of the thigh (Fig. 3). A bandage of firm muslin served to maintain the necessary pressure to keep the plaster adhering. The buckles were left uncovered.

To the leg was applied the arrangement of adhesive straps commonly used for producing traction on the knee, but in a reversed direction. Four central strips of plaster, one and one-half inches wide, and long enough to extend from condyle to malleolus, and four side strips, one-half inch wide and one and one-half as long as the preceding, were cut. They are arranged in

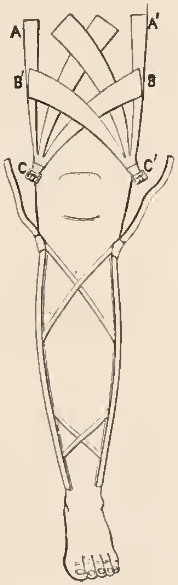

FIG. 3.

two sets as shown in Fig. 2, with the adhesive surfaces all facing the same direction. One end of each pair of strips was folded over those of two smaller strips, and all were sewn to a short piece (about six inches), of $^1/_8$ inch surgical webbing. The two sets of plasters were applied to the leg as follows: The pieces of webbing were secured in the buckles, so that the pull came squarely on the latter. The junctions of the webbings and plasters were located on the side of the leg about three inches from the buckles in order that the slack might subsequently be taken in. The first broad strips of plaster were placed down the leg, the narrow strips were wound in spiral turns around the leg and the plaster, and the remaining broad strips placed on top of them all. (Fig. 3.) The whole was secured by a bandage, which passed over as well as under the thick end where the webbing was sewn. A firm base for counter traction was thus secured, and as the straps were drawn through the buckles, traction was exerted upon the whole surface of the quadriceps. Before the plaster was applied the joint had been punctured by a tenotome introduced as recommended by Barwell, in a direction oblique to the skin, for the purpose of producing a valve-like opening, and a clot having been extruded, a very perfect approximation was attained. It was easily possible even to cause the fragments to overlap. Fixation was provided by the use of the knee splint of Dr. Judson, and the limb was slung in a slightly elevated position. This instrument (Fig. 4) affords a very simple and perfect means of fixing a knee in any desired position for any purpose whatever. It is made of mild steel or iron. It is bandaged on or secured by straps and buckles. For an adult the stem should be one by one-eighth inch, and the cross pieces which are riveted to it should be three-quarters by one-sixteenth. The foot piece, which is shown as detached, I have subsequently added for cases where support for the foot is desired. It is fastened to the brace by two screws and may be removed when the limb is used in walking. The surface of the knee was open at all times to inspection and adjustment. At the end of ten weeks the patient was allowed to walk, the joint being still immobilized by the Judson brace. Three

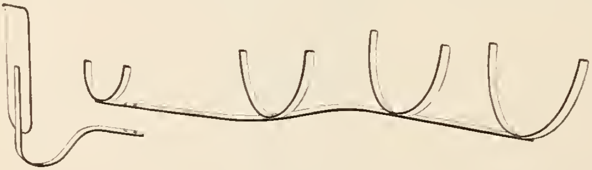

FIG. 4.

weeks later an instrument (Fig. 5), designed to accomplish the following ends, was applied : (1) To relieve the quadriceps muscle and therefore the patella from the strain involved in the act of extension. (2) To permit a regulated arc of motion. (3) To provide a safety check against any sudden and extreme flexion, such as might be produced by the patient's weight unexpectedly coming upon the not fully extended limb. The brace was attached to the shoe, the stiff spiral spring acted as an extensor. The strong steel discs shown at each side of the knee-joint, were centrally attached by the steel rivets of the joint, and each disc was provided with a circular slot, and a number of circularly arranged holes. By screwing the disc through one of these holes to the thigh-upright the slot could be brought to move as desired past a screw in the leg-upright. And the impingement of the end of the slot on the screw afforded the desired check. Motion was gradually increased. This apparatus was worn with perfect comfort, and the patient was able to walk and dance in it with ease. It gave her such a feeling of security that at the end of one and a half years she relinquished it with reluctance.

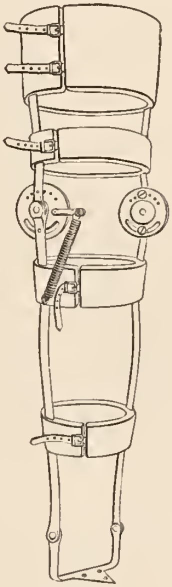

Fig. 5.

IN MEMORIAM—CORYDON L. FORD, M.D.

BY ALEX. J. C. SKENE, M.D.

Corydon L. Ford, that gifted teacher of anatomy, is no more. He finished his one hundred and ninth course of lectures on April 4, 1894, the same date that his life-work and his life with us ended. Born and reared in some little unknown village in the State of New York, the beginning of his life was as obscure and commonplace as that of Abraham Lincoln, whom he resembled in some of his rugged, strongly marked and picturesque features. The impression at this time is that he obtained his education at the public school, and may have had some aid in a higher grade of study, but he never had a collegiate training. At an early age he taught in a public school but only for a short time, and then entered upon the study of medicine. With but little preliminary training he made great progress by his own gifts, energy, and perseverance and heroic efforts. As soon as he graduated he began to teach anatomy in some subordinate position, and in a little while rose above his associates and took first place.

"The greatest teacher of anatomy," he has often been called, and I believe he was the greatest that this world ever saw. To live, to act, to die as this man did is as full and complete a record as the human heart desires. Men there may have been who knew more about general anatomy; some made more discoveries in this branch of science, but few, if any, equaled him in his knowledge of human anatomy, and none came near to him as a teacher. Ford stood alone, far above all others, in his capacity as professor of anatomy, gifted far beyond compare with that rare power to impart knowledge. He was ever on a higher plane than his contemporaries. He took this position, too, in spite of many disadvantages. As already stated, his early education was far from being as complete and comprehensive as is now deemed necessary to fit a man for the profession of medicine, yet he did preëminently that for which many Americans have been noted, namely, superb scientific professional work without a full preliminary training. He began to teach anatomy early in life, and without a break he continued his work for nearly sixty years. A slight physical defect (the only one in his whole being) made him lame; this disqualified him for the practice of medicine and surgery to any great extent, but happily anchored him to the study of science and teaching. This no doubt had much to do with determining his course of life and in making his career, now closed, so thorough and well rounded out. This weakness of one limb was far more than compensated for by extraordinary health and strength, mental and physical.

His knowledge of anatomy was most extraordinary and was gained at first with a little help from books and teachers, and then all the rest was obtained by his study of nature. He did not go to the library to investigate or refresh his memory, but to the living structures in the woods, fields, highways and byways, and to practical investigations in the laboratory of practical anatomy. He was a pioneer in this method of study, for I believe he preceded Agassiz who founded the great school of practical observation and study of zoölogy from nature. He was also a pioneer in his teaching by object lessons and demonstration. His knowledge of the great principles of his subject was most thorough, and in every detail complete and familiar as the alphabet of his mother tongue; so much so that he was able to accurately express himself without effort or hesitation. He was in this respect like the choir of the forest whose heads and hearts are full, and overflow in melodious song.

His knowledge and love of anatomy and his enthusiasm, which never slumbered, were the basis of his strength. His method of teaching, the Socratic, was by raising questions and answering them. This method he matured to the highest degree. His ability to excite interest in students and keep them interested was wonderful. Anatomy was the "pons asinorum" of medical students until Ford made it as fascinating as poetry or fiction. So plain, simple and interesting were his lectures that a layman who knew nothing of the great science of organization would listen to him by the hour with pleasure and profit. He made every avenue to the mind effective. All that he said reached the ear, and what he did reached the eye at the same time. He made his descriptions and demonstrations go hand in hand in as perfect harmony as a master-artist could play an "Aria" and its accompaniment. He loved anatomy and made others join him in this affection. He never drove students or urged them, but wooed them to admire and study the subject in hand. The quaint intonations of his clear simple sentences, the happy gesture and twinkle or flash of those soft grey-blue eyes, and a smile that lighted up the plain strong face, all together sent facts home to the dullest brain and made them stay there. Like a strong healthful boy at his favorite play he made his students eager to join him. So thoroughly familiar was he with his subject and so strong, that he was free to think only of how to impart knowledge. With no apparent effort his vast storehouse of facts seemed to well up constantly in his mind and find expression almost automatically. He could at a glance tell those who failed to follow him. He would look at a class of hundreds and pick out those who had not seen, heard and comprehended what he did and said. He would repeat for their special benefit and then go, carrying all with him agreeably and easily. He not only taught but made sure that every one of his class learned all he ought to know. He anticipated all the obstacles and difficulties, and surprised his students by showing them just what had been puzzling them and what they could not grasp in reading the books. Whenever he wished to inculcate any great principles of anatomy that ran through a number of organizations, he had at hand any number of illustrations; birds, reptiles, fishes were all pressed into service to show the design and principle of structures and their physiological adaptation.

Not being engaged in the actual practice of medicine or surgery one would naturally expect that his teaching would have been impractical, that he would deal more with the science of anatomy than with its practical utility, but here he surprised every one who ever listened to him by teaching physiology and surgical anatomy most impressively. A few words regarding what any structure that he had described was "good for", very briefly but fully taught physiology, and in his descriptive anatomy he invariably added to the interest of his demonstrations by showing how convenient it was for the operator to know about the relations of things. "What is it good for?" "What is the use of it?" were questions which he continually raised, and answered them briefly, practically, and in a way never to be forgotten by the physiologist or surgeon. He would often say, "You may have occasion while operating to look for this artery, here it is; what is in front of it? look and see, here it is. What is behind it? on the right of it? on the left of it?" To each question came the answer, "You can see it right there."

Thirty years ago I attended his lectures and demonstrations, and many of the practical and useful things in anatomy then presented remain as clearly in mind to-day as when they were at first impressed. I have heard him lecture daily for months without hesitating a moment for the plainest and most effective of words to express his ideas, and without once using the personal pronoun, I. He was not only, then, the greatest teacher of descriptive anatomy but of surgical anatomy, and of physiology ; and this was done without any apparent effort, It may be truly said that one learned anatomy from Ford without the consciousness of being taught. Anatomical lectures and anatomy as a study have always been considered dry, difficult and uninteresting, and the great majority of students dread them, and are glad to be through with them. No student that I have ever seen, no matter how lethargic, ever had a moment's time to grow weary when he was with Ford. There is much in the practical study of anatomy that is not by any means attractive to the delicate and refined young man, but in Ford's hands every organ and tissue was made beautiful and inviting. All who ever saw him in the amphitheater will remember how carefully and cleanly he prepared his subject ; how every portion, excepting the one under observation, was carefully covered up. Everything that might seem disagreeable was at once eliminated, and everything was made pure, beautiful and inviting by the touch of this great master.

As a man, Professor Ford was clear-headed, kind-hearted, pure-minded. He lived a life of seclusion, knowing nothing of the so-called pleasures of life. It is doubtful if he was ever in a place of amusement during his life, but he was quite entertained in his work with his students, associates and friends in college. Plain, simple and severely correct in all his habits, his wants were easily supplied, and by setting a limit to his desires he was able to gratify them all with little means. While Professor Goodsir was receiving ten or fifteen thousand dollars for teaching anatomy in Europe, Professor Ford in this country was receiving little more than fifteen hundred. Strange it is that in this country the people will give thousands of dollars to a prima donna for singing a song while college professors labor for the wages of a ploughman. It is more wonderful that men like Ford can be found who love science, learning and humanity enough to serve without gold.

He gained the respect of every one who came in contact with him, and this respect grew to profound admiration. He associated always and intimately with students, and the nearer they came to him the more they felt his strength and goodness.

There was no cold atmosphere of assumed dignity put on to conceal weakness. He was pure, manly and strong enough to be always transparent while with his students, so that the more they knew of him the more they found to admire, and the surer they felt that there was no weakness that he had to conceal. The wildest boys in his class became gentle and respectful, quiet and attentive, the moment he looked at them. He was the gentle shepherd that led his flock with tender care. He was unassuming, retiring, gentle—almost timid—and in his manner, in this respect, he seemed to possess the disposition of the refined woman, yet withal he was one of the bravest men that one could meet. In the session of 1861-2, his associate, Professor Gunn, that remarkable surgeon, was serving the country as a military surgeon, and Professor Ford in addition to his lectures on anatomy took up the work of his absent associate, and then we had occasion to see him operate, and this he did with an accuracy and firmness of touch which led one to believe he was wholly unconscious of the term "nervous" as commonly used. One of his students, at the time, who had a fancy for surgery, but was fearful that he would not be able to practice that branch of medicine because of his tender-heartedness, learned from Ford that the tender are the bravest. This student had the impression, which was popular then, and is probably so at the present time, that a surgeon must be hard-hearted and unfeeling in order to be able to do major surgical operations; but an incident in the life of Ford taught him the truth on this subject. A few days after seeing the professor calmly and coolly do a very important operation in the amphitheater, the student had occasion to sit beside him at a public meeting where the speaker told an exceedingly interesting but pathetic story, and at the conclusion of the narrative when he turned to look at the master he found that ideal anatomist and surgeon with tears flowing as freely as they ever did from the eyes of the most affectionate mother or maid.

I have an idea also that he was a man of profound religious feeling. I know not and care not what his creed was, but he impressed me as a man who adored the good, the right, the true, omnipotent and benevolent; that the Being with these attributes was the God that he worshipped and the deity whom he saw through his works and whom he aimed to serve in all things. Solid as a rock which long resists the elements, he remained young far into the afternoon of life. At three-score and ten as active as at forty, with abundant hair, without a silver thread noticeable in it; when nearing four-score there was a little more repose, a little less fire in his lecture, more time in the easy chair after the chief work of the day was done, less time in the museum and laboratory, but no signs of decline such as are usually visible in the aged. The sunset came to him, as it comes in his own country, after a very brief twilight.

The influence which Professor Ford exerted upon the profession of this age can be thought of but cannot be computed. He was not the physician or surgeon who serves his fellow men in a way which brings admiration and endless loving memories of his goodness and value. Works of such good men are seen and appreciated, and when they have finished their life-work we can estimate them by comparison with other great men in the profession who have come and gone; but I contend that the influence for good exercised by Professor Ford in his long career was as great, or greater than any in the profession, although unseen by the vast majority of mankind. He taught anatomy when there was so little time for it that there would have been but few anatomists sufficiently qualified in this branch of medicine to be either good physicians or surgeons. He taught more and in less time than any other man could do. How many physicians and surgeons are there in this and other countries who owe their success to the grand work done for them by Ford? He certainly laid the foundation upon which it was possible to build an education which could secure success. He robbed anatomy of all that was unattractive or repugnant in the study, and made it a living, pure, attractive and useful knowledge. The thousands of men who have attained to eminence in the profession, I know, owe a great part of that success which has made them renowned, to the unseen, unknown, and perhaps forgotten influence of Ford. Nor was his influence for good limited to his teaching of anatomy. He made science so interesting in its most obscure, difficult and uninviting department that students were encouraged to take up the other branches of medicine with an enthusiasm that they never would have known had it not been for the influence of this remarkable man. Perhaps no man that ever lived did more towards raising the standard of the profession in this country, so far as surgery is concerned at any rate, to the high plane which it now occupies, than this same teacher of anatomy.

Another way in which he rendered the profession a service which should keep his memory ever present and ever young was, that he made teachers of other men. Many of those who are teaching the various branches of medicine to-day owe much of their success to the fact that he, unconsciously, perhaps, on his part or the part of his students, taught them how to teach others. On one occasion he complimented a young teacher (who had been his pupil) upon his success. The youthful doctor thanked his old master and added, "It comes naturally: I have the teaching diathesis, caught it from Professor Ford when I was a boy." He did much to make good, honest, faithful men; he excited interest and induced men to study, and to study thoroughly and faithfully, and imparted to others the power to teach, to a degree that few if any have equaled; and altogether his influence on the profession in America is perhaps greater and more lasting than that of any who went before him to the "pale realms."

In looking back to early days, the pleasantest and most profitable in one's student life began while with Ford, and the impressions then made stand out as a guiding star and beacon light, shining even now and telling that his influence still lives and will live after him.

FATHERS OF MEDICINE.

(These portraits appeared in May number.)

FRANCOIS MAGENDIE.

The writer has before him the "Formulary for the Preparation and Employment of Many New Medicines; such as the Nux Vomica, the Salts of Morphine, the Prussic Acid, the Strychnine, the Veratrine, the Alkalis (sic) of the Cinchona, the Emetine, the Iodine, the Iodide of Mercury, the Cyanide of Potassium, Croton Oil, the Salts of Platina, etc., etc.," by F. Magendie, translated and edited by John Baxter, M. D., and printed in New York in 1827.

It is interesting to read of these (to us younger doctors at least) old fashioned remedies as "new medicines," and when we associate the description with one whose name is so indelibly associated with one at least of these "new medicines," as he whose name is given to the solution, a little vial of which is to be found accompanying the hypodermic syringe in the pocket of every medical practitioner in the land, it is hard to realize that only three-quarters of a century have elapsed since the old "stand-bys" of our materia medica were spoken of as new remedies, and their physiological effects studied by the great father of experimental medicine. For it is as a student of the effects of new medicines on the lower animals that he speaks, and boldly asserts that "fifteen years' experience in my laboratory, and at the bedside of the sick, enables me to affirm *that these medicines and poisons act in the same manner upon man as upon other animals* (italics Magendie's). My confidence in this respect is such, that I do not hesitate to use on myself the substances which I have found innocent in their effects upon other animals."

It was as such an experimenter that the work of Magendie marks an epoch in the history of our art.

François Magendie was born at Bordeaux in 1783, and died in Paris in 1855, a full quarter of a century after this little book was written, during which time the author had the rare good fortune to see his "new medicines" placed in a permanent place among the chief agents of our armamentarium.

He was professor of pathology in the Collége de France, and physician to the Hôtel-Dieu, and one of the men who made the French school of medicine so famous in the earlier and middle parts of this century.

Joh. Hermann Bass, in his most excellent "History of Medicine and the Medical Profession," says of him: "Above all, as an eminent and skilful, though often unsystematic and unnecessarily cruel, experimental pathologist, Magendie introduced the experimental method into pathology and pharmacology, and thus largely developed experimental pathology and the most modern experimental pharmacodynamics. The latter science occupies itself chiefly with the alkaloids, of which Magendie introduced a large number into practice.

"He sought to reduce medicine (except nervous activity in which he admitted the existence of a vital principle) to physiologico-chemical and physiologico-physical laws. For this purpose he cultivated experience without any admixture of reasoning, and this experience with Magendie was the equivalent of the results of physiological and pathological experiments or vivisections."

Magendie was a solido-humorist in his pathology, a most accurate diagnostician, but was thought to be "almost too simple in his therapeutics."

It is not only as an experimental student of the action of "new medicines" that Magendie is famous, for as an investigator in the field of anatomy he gave us our first knowledge of the foramen which bears his name; and as an experimental pathologist, he made and afterwards instigated the experiments which resulted in giving pathology the terms ichoræmia, pyæmia, metastases, as we understand them to-day.

Though Haller had previously injected ichor into the veins, it was reserved for Magendie and those who coöperated with him to correctly interpret the phenomena.

His work on the "Functions and Maladies of the Nervous System" (1839), was a great factor in making this branch of the profession the specialty it has become.

Among Magendie's works, the most celebrated are "Précis élémentaire de physiologie" (1816); "Mémoire sur le vomissement" (1821); "Formulaire pour l'emploi et le préparation de plusieurs noveaux médicaments, etc." (1821); "Leçons sur les functions et les maladies du système nerveux" (1839); "Leçons sur les phénomènes physiques de la vie" (1835), etc.

J. H. HUNT.

LUGOL.

J. G. A. Lugol, the famous French physican was born at Montauban (Tarnet, Garonne), August 10, 1786.

He studied medicine in Paris, graduating in 1812. The subject of his thesis was "De l'adolescence considérée comme cause de plusieurs maladies et comme époque critique de quelques autres."

Soon after graduating he instituted a series of private lectures on various topics connected with the subject of internal medicine. These lectures were continued for some time, and Lugol had the gratification of drawing very large audiences.

Later when he became connected with the Hospital of Saint-Louis, he devoted himself diligently to the study of scrofula, the knowledge of the symptoms and treatment of which he greatly improved.

As a result of his studies and investigations, he wrote many very valuable monographs.

To Lugol also belongs the honor of having introduced iodine as a therapeutic agent for scrofula as well as for many other diseases.

The iodine solution which bears his name (Lugol's Solution) is well known, and is official in the United States Pharmacopœia, under the title of Liquor Iodi Compositus. His name is also attached to many other preparations of iodine.

Lugol published many articles upon the use of iodine therapeutically, and especially upon its use in the treatment of scrofula. Among them may be mentioned, "Mem. sur l'emploi de l'iode dans les maladies scrofuleuses, sur l'emploi des bains iodurés etc., sur l'emploi de l'iode." Paris, 1829-31; translated into German by A. P. Wilhelmi, Liepsic, 1836. "Recherches et observations sur les causes des maladies scrofuleuses," Paris, 1844; in German by L. von Haxthausen, Siegen, 1844, and G. Krupp, Liepsic, 1845.

It is also to be remarked that Lugol, in opposition to Broussais, contended with great force for the dependence of the various symptom groups, exhibited by scrofula upon a single pathological process.

Lugol breathed his last on the 16th of September, 1851, but his name still lives, and his works are glorious monuments in the history of medicine.

H. W. Schimpf.

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BOOKS WANTED FOR LIBRARY, MEDICAL SOCIETY COUNTY OF KINGS.

In order to complete the files in the surgical section of the Library of the Medical Society of the County of Kings, an appeal is hereby made to members and non-members for the following periodicals which are wanting:

"Annals of Surgery:" Vol. vii., No. 6; Vol. x., No. 3; Vol. xi., Nos. 1, 2, 3, 4 and 5; Vol. xii., No. 3; Vol. xiii., Nos. 4 and 6; Vol. xiv., No. 5; Vol. xv., all; Vol. xvi., all.

"Revue de Chirurgie:" 1887, Nos. 2, 3, 4, and 10; 1890, No. 1; 1891, No. 12; 1892, No. 9; and complete volumes before 1887.

"Archives Provinciales de Chirurgie:" Tome i. Nos. 1, 2, 3, 4, and 6; Tome ii. No. 1.

"Centralblatt für chirurgie:" 1887, Nos. 4, 6, 7, 9, to 28 inclusive, 33, 36, 41, 43; 1888, Nos. 4, 33 and 34; 1889, Nos. 13, 20 to 25 inclusive, 27 to 32 inclusive, 34 to 37 inclusive, 39 to 46 inclusive, and 49 to 52 inclusive; 1890, 52 numbers wanting; 1891, 52 numbers wanting; 1892, Nos. 1. to 29 inclusive, and 49; 1893; Nos. 23 to 26 inclusive, and 45; 1894, No. 9; and complete volumes from 1873 to 1887.

"Beitrage zur Klinischen Chirurgie:" Complete volumes before 1893.

These periodicals will be very gratefully received and credited to the donors.

James P. Warbasse,
Associate Librarian.

356 Bridge Street, Brooklyn.

THE BROOKLYN MEDICAL JOURNAL.

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Books for Review and Exchanges should be addressed BROOKLYN MEDICAL JOURNAL, 356 Bridge Street, Brooklyn, N. Y.

All other Communications, Articles for Publication, etc., should be addressed Editors BROOKLYN MEDICAL JOURNAL, 173 Joralemon Street, Brooklyn, N. Y.

Remittances should be made by money-order, draft or registered letter, payable to BROOKLYN MEDICAL JOURNAL, and addressed to Business Manager.

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Each contributor of an Original Article will receive five copies of the JOURNAL containing his article, on application at the Rooms of the Society, 356 Bridge Street.

Electrotypes will be furnished authors free of charge, if proper drawings are provided. Electrotypes of engravings will be furnished authors at cost, when they wish to preserve them for future reproduction.

Alterations in the proof will be charged to authors at the rate of fifty cents an hour, this being the printers' charge to the JOURNAL.

EDITORIAL.

LIBRARY OF MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Dr. William Browning, the Librarian of the County Society, is to be congratulated on having accomplished as much as he has with the limited facilities at his command. The appointment by him of Associate Librarians, one to each department of medicine, has given such additional impetus as to demonstrate more perfectly than ever before the utter inadequateness of the means placed at the disposal of the Librarians. Dr. Warbasse has made a complete catalogue of the works on Surgery in the Library, and requests that those who have in their possession books which will be of aid to those seeking help in surgical matters, will send such books to the Society Rooms. He desires, especially, certain numbers of journals to complete his files, and we elsewhere publish his list of "Wants." It would gratify the Editorial Committee if, through the instrumentality of the JOURNAL, his wish was complied with.

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N. Y. PHYSICIANS' MUTUAL AID ASSOCIATION.

This Association continues to exercise its beneficent influence, as is shown by its report for 1893. Every physician should be connected with it, not alone because his family may at any moment be greatly benefited by his membership should he be suddenly stricken, but also because through its instrumentality he may be the means of aiding, in times of the severest trial which can come to humanity, the widow or children of a deceased brother.

BROOKLYN COLLEGE OF PHARMACY.

The Brooklyn College of Pharmacy celebrated its third annual commencement on the evening of Thursday, April 19th. We congratulate its officers on the good work which it is doing, and the bright prospects which are in sight for it.

THE DANIEL AYRES PATHOLOGICAL COLLECTION.

Those who, during the lifetime of the late Dr. Daniel Ayres, were privileged to inspect his private pathological collection will be gratified to learn that through the generosity of his sons, Drs. Morgan Ayres, and H. Messenger Ayres, it has been presented to the Hoagland Laboratory to be placed in the museum, where it will remain a permanent memorial to this distinguished surgeon and pathologist.

LOW MATERNITY—BROOKLYN HOSPITAL.

In the new wing of the Brooklyn Hospital, which was opened last June, a Maternity Department, has been established.

In recognition of the generosity of Mr. William G. Low, of this city, who contributed $30,000 toward the erection of the wing, and toward important improvements in the hospital, this department has been called by the trustees, the Low Maternity. There has been such a department in the hospital for many years, but its facilities were limited. The new wards are finished and furnished with special reference to the comfort and safety of the patients. The wards have lofty ceilings; the floors are cemented; the walls are finished so as to be aseptic; the rooms all have abundance of direct sunlight, and the outlook from the windows commands a wide and pleasant prospect over the lawns, the neighboring park(Fort Green Park) besides an extensive view of the city. In the care of the patients every attention is given to carrying out the most improved methods of antiseptic and aseptic treatment. No other maternity in this country is more completely furnished for carrying on its work than is this one, though others are larger. It is entirely separated from the surgical wards, and has its own equipment of instruments, sterilizers, wheeled stretcher, outfit of linen, dressings, etc., which are never used in any other part of the hospital. The staff of the hospital has been enlarged by the appointment of an Obstetrician, Dr. Francis H. Stuart, with an Adjunct, Dr. W. B. Brinsmade, whose service is continuous.

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CORYDON L. FORD, M.D.

The death of Dr. Ford, which we announced in the May number to have occurred on April 14, was a shock to his Eastern friends. It was not long since we received a letter from him at Ann Arbor, accompanying his photograph, in which he said: "I am now giving my fortieth annual course of lectures here, 1854–1894. This makes my 109th course: Castleton, twenty-four, (two a year); Pittsfield, eight; Brunswick, seven; Brooklyn, nineteen; Ann Arbor, forty; to ladies, here, eleven."

He once told us that when he was connected with the Geneva Medical School a microscope was imported for the college from France, and that when it arrived there was not a professor nor any one else connected with the college who could put it together and use it. "And now", he said, "every first course student understands the use of the instrument."

From the day he received his medical degree, when he was appointed Demonstrator of Anatomy, to the day of his death he was continuously occupied in teaching, a record which we think, considering the length of time involved, is unparalleled in this country.

Dr. Skene has, in this number of the JOURNAL, paid a most fitting tribute to the memory of this distinguished teacher.

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CORRESPONDENCE.

A. C. E. AS AN ANÆSTHETIC.

TO THE EDITORS OF BROOKLYN MEDICAL JOURNAL:

I have read with much interest an article in your April number on "Chloroform and Ether" by Dr. Langstaff, and especially the discussion of the paper, in which the status of the A. C. E. mixture receives serious attention.

During a service of about twenty months in the Methodist Episcopal Hospital of Brooklyn, I gave an anæsthetic about three or four hundred times under the direction of Drs. L. S. Pilcher and Geo. R. Fowler. Ether was used (pure) almost exclusively ; chloroform in the proportion of about one to twenty cases in young children or in operations about the brain.

The only case in which the immediate effects were more than temporarily alarming in all this series of ether cases, was in a moribund patient suffering from perforation and intraabdominal extravasation of fæces due to a large neglected strangulated hernia.

The small number of cases in which I gave chloroform is not a just basis for conclusions ; and yet even in that small number it was frequently found necessary to discontinue chloroform and substitute ether on account of cardiac symptoms.

But I was impressed at that time, and am still more impressed now, with the belief that the unfortunate results of many cases which seemed favorable up to the moment of their removal to the "recovery room" were due to either the excessive intoxication with its accompanying violence, muscular and mental ; to the excessive vomiting or to the intense disturbance of the renal system which universally follow, either severally or combined, the prolonged inhalation of ether, and so frequently follow its use in only moderate quantity.

I well remember what an occasion of pleased surprise it was to receive a report that so-and-so had recovered from the anæsthetic without *much* nausea; even if the urinary examination of the following day showed marked diminution or even threatened suppression, with epithelial débris, or even casts and traces of albumen ; while the bandage which successfully withstood the struggles of the "recovery room" was a monument to the interne who applied it.

On my return to this city in 1889, I entered a very large and active railroad surgical practice as assistant to Dr. A. D. Bevan, now Professor of Anatomy in Rush Medical College of Chicago.

I found the universal practice in both large hospitals here to be the use of A. C. E.

My new position gave me the advantage of another large experience in the use of anæsthetics, and I argued and remonstrated in favor of ether, which I had been taught was "safe," even if unpleasant.

I was told, " Never mind ; go ahead and use A. C. E. on my cases, and you'll like it better than either ether or chloroform." And I do.

It is used here almost exclusively with the Esmarck inhaler and drop bottle, and the quantity required is but slightly in excess of the quantity of chloroform required to produce the same effect.

The period of production of and recovery from anæsthesia corresponds very closely to the same period under the use of chloroform.

The after-effects are vastly less pronounced.

I have never seen a case of really alarming symptoms from its use. Of course, I mean in the hands of a qualified and skillful anæsthetist. Soda water might be fatal in the hands of a bungler.

We of the West cannot send cases to the hospital as readily as can our N. Y. brethren; and I have seen major operations of all kinds, including nearly all the possible "otomies" and "ectomies" done in private houses where it was necessary to heat the operating room by a stove or fireplace or to have a lamp held near by.

Chloroform was considered unsuitable; ether was dangerous on account of fire; but A. C. E., on account of the small quantity was safely used. I have used it on my own wife and babies; in emergencies in obstetric work; always when necessary to anæsthetize for repair of cervix or perineum immediately after delivery; and in almost every conceivable condition of heart and lungs; and always with less nervousness than when using chloroform and with less nuisance than when using ether.

Lastly, my own experience after appendectomy, when I vomited for four days and tasted *ether* all the time, has made me skeptical as to its being perfect when used pure.

I am no chemist, and do not know if new compounds are formed or not. If poorly stoppered, I believe it loses ether by evaporation and becomes more strongly chloroform, but outside of this, old mixtures have seemed as effective as fresh.

Possibly the West may give the East *clinically* some pointers on A. C. E.

HERBERT W. CARDWELL.

Portland, Oregon.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society Building, 356 Bridge Street, on Tuesday evening, March 20, 1894, at 8 o'clock.

The President, Dr. Geo. McNaughton, in the Chair.

There were about sixty members present.

The minutes of the previous meeting were read and approved.

The Council reported favorably upon the following applications and recommended their election to membership :

Drs. Frank Terry Brooks, Geo. R. Hawley, Louis G. Ager, J. A. Somers, E. Frank Marsh, John T. Gibbons, Wm. Waterworth, J. T. Golding, S. H. Benton.

The following applications for membership were presented :

Dr. Jacob Londoner, 62 McKibbon Street ; University of Dorpat, Russia, 1892 ; proposed by Dr. Leon Louria ; Dr. D. Myerle.

Dr. James H. Wells, 945 St. Marks Avenue ; L. I. C. H., 1893 ; proposed by Dr. Thos. L. Wells ; Dr. D. Myerle.

Dr. Louis J. Paris, University of Penn., 1888, proposed by Dr. John H. Coverly ; Dr. D. Myerle.

Dr. H. Lee Smith, 580 First Street, University of City of N. Y., proposed by Dr. Frank Little ; Dr. E. A. Day.

Dr. Edw. E. Hicks, University of N. Y., 1893.

ELECTION OF MEMBERS.

The following having been favorably reported on by Council were declared elected to membership : Drs. Allen Smith Heath, Leo Rattnor, W. W. Moon, J. A. Somers, E. T. Buck, J. F. McCaw.

SCIENTIFIC BUSINESS.

Dr. Ezra H. Wilson presented a paper on the "Practical Results attained in Bacteriology," illustrated with lantern slides.

Discussed by Dr. Belcher.

Dr. Jos. H. Hunt presented a "Report on the New Pharmacopœia." Discussion by Drs. Golding and Schimpf.

On motion of Dr. Maddren, duly seconded and carried, the Report was received and the Committee discharged with thanks.

REPORTS OF COMMITTEES.

The Telephone Committee, through the Secretary, presented the following report :

Brooklyn, N. Y., March 15, 1894.

Dr. Z. T. Emery, Chairman of Committee on "Telephone."

Dear Doctor : It is my pleasure to report the result of the hearing before the Senate and Assembly Committees who met in joint session at Albany, New York, March 14th, to consider the bill introduced by Mr. Herst in the Assembly to relieve the existing causes of complaint against the telephone service throughout the State and particularly in the larger cities. The bill, which emanates from the N. Y. Board of Trade and Transportation, provides :

1. A charge in proportion to the number of inhabitants ; for example, in cities of 500,000 and not more than 1,000,000 not to exceed sixty-six dollars per annum (Subject to § 3).

2. Subscribers not to be taxed for communicating with their own office.

3. Rate to be proportioned so that the Company will receive a net profit of ten per cent.

4. State Comptroller, Attorney General and State Engineer and Surveyor to constitute the Committee to carry the law into effect.

The delegation was too large for the committee room, necessitating the hearing to be held in the Senate Chamber.

Twenty-two organizations were represented, comprising 10,000 business firms, especially from New York, Brooklyn, and Buffalo ; notably, The N. Y. Board of Trade and Transportation.

Grocers, Association of New York.
Undertakers " " " "
Buffalo Telephone Subscribers Association.
Common Council of City of Buffalo (by its Chairman).
Kings County Medical Society.
" " " Association.
" " Pharmaceutical Society.
" " German " "
German Medical Society of Kings County.
Telephone subscribers of Binghamton. Erie County Pharmaceutical Society.

A full presentation of grievances was allowed and eloquently advocated by professional and business men who were delegates ; this strong protest cited the evils of which we in Brooklyn chiefly complain and must have positive weight in adjusting the differences.

The Telephone Company was represented by Hamilton Harris and Mr. Gardiner, the latter from the Bell Telephone of Buffalo. Their arguments were a general denial of imposition, that increased rentals were made necessary by expenses incident to improvements and that it could be shown by figures that their profits were not so enormous as the delegates imagined (?). Finally, Mr. Gardiner raised the question of the right of the State to interfere. An adjournment for the telephone people to present their figures and facts was agreed to until March 28th.

It would not be just to conclude the report without tribute to the earnest eloquence of Dr. Brundage, President of the Brooklyn Pharmaceutical Society, who voiced the sentiments of all the Brooklyn delegates.

Respectfully submitted,
D. Myerle.

Dr. Maddren moved that the Society recommend to the Board of Trustees that the expenses of the Telephone Committee in endeavoring to secure the passage of the bill above referred to, be paid. Seconded and carried.

A communication from the Health Commissioner was read and received, calling the attention of the members of the Society to the prevalence of small-pox, and the necessity of influencing patients to be vaccinated.

There being no further business, on motion the meeting adjourned.

David Myerle, M.D.,
Secretary.

THE BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

Eleventh meeting, May 11, 1893.

The President, Dr. Sherwell, in the chair.

1. Dr. Sherwell presented a case of chronic pigmented urticaria. The patient was a male, twenty-four years of age. The eruption consisted of various sized lesions, the color varying from a deep brown to light shades of red, while on some portions of the body they were purpuric. Some of the lesions showed a tendency to develop into bullæ, while in other places loss of tissue (subcutaneous atrophy) was noticed. The eruption had existed

since the patient was eighteen months old, and excepting for slight itching during warm weather was unattended by any subjective symptoms.

2. Dr. Morton presented a case of a girl, thirteen years old, with ulcerations on the arm, foot and face. The bridge of nose was slightly depressed and general adenopathy existed.

These ulcerations had been present since early childhood. Dr. Morton did not consider the lesions lupus, nor yet was he clear about their being scrofulodermata from the manner of their invasion and the shape of the nose, etc. He considered it a case of syphilis, though not congenital in origin, and was inclined to clear the diagnosis by treatment.

Dr. Raynor thought the case to be a scrofuloderma, with which diagnosis Dr. Sherwell agreed.

Dr. Winfield saw a marked resemblance to the case he presented at the January meeting, of the Italian boy with syphilis contracted from his wet nurse. He thought that antisyphilitic treatment with tonics would be required.

3. Dr. Jewett reported a case with the following history :

Child, two years old. About three weeks after recovering from an attack of measles there began a peculiar papillo-bullous eruption over the whole body. The rash first appeared on the face and extremities. At first it was of a dull red color, hard and shotty. The change from a papule to a vesicle rapidly took place ; the vesicle contained serum, not pus. However, as the individual lesions developed (enlarged) some of them contained pus, probably from external contamination. The lesions were surrounded by an inflammatory collarette, and some of them ran together similar to the confluence of zoster. The bullæ did not rupture but dried into a thin scab, which, being removed, left the skin in almost normal condition. There was no history of specific taint nor the administration of any drug liable to produce such cutaneous eruptions.

Dr. Winfield, who had seen the case, in consultation, thought from the gross appearance that it closely resembled pemphigus, although the history was not sufficient to make a positive diagnosis.

The possibility of it being iodide eruption was considered by Dr. Sherwell, who had seen a number of cases where the history of the ingestion of the drug in question was as obscure as in this case.

DR. JEWETT'S SECOND CASE.

Dr. Jewett reported a case of a servant girl who presented many of the subjective symptoms of small-pox, which were followed in about two days by an eruption as erythematous spots on forehead, face, and later over neck and back, and finally a few small spots on the lips. The eruption was never papular at any time, but began rather as a macule followed by vesiculation; there was considerable itching and burning just at the advent of the lesion; otherwise there was no special discomfort.

Drs. Sherwell and Winfield remarked on the resemblance to those cases of dermatitis multiforma following La Grippe, which in this case might account for the subjective symptoms. After the case had been under observation for about two days the marked cutaneous symptoms of dermatitis multiforma developed.

GEO. D. HOLSTEN, M.D.,
Secretary.

Twelfth meeting, June 18, 1893.

The President, Dr. Sherwell, in the chair.

1. Dr. Winfield showed the patient with initial lesion on the lip, which he presented at the April meeting. The patient had been without treatment for some time and the ulceration had started out again, being now worse than it was before.

2. Dr. Jewett presented a case of epithelioma of the lower lip, of two years' standing, which followed a burn. At present the whole lip, lower jaw and part of the tongue were involved. The patient had been treated with caustics, and was now presented to show how meddlesome interference had rapidly hastened its growth.

The discussion was in the line of treatment. Dr. Morton thought the man's life might be saved or prolonged by a thorough resection of the lower jaw and the removal of all enlarged glands. The other members of the Society considered the case hopeless.

3. Dr. Sherwell presented a case of secondary syphilis resembling small-pox in its maculo-papular stage. The disease was of six months' duration.

4. Dr. Morton presented a case of primary pigmented syphilis with the following history: The disease was acquired eighteen months ago in China. When first seen he had a papular eruption which subsequently gave way to pigmented spots. This pigment has been entirely absorbed from the spots and the skin is slightly thinner and more atrophied there than in the normal skin and of a livid color. This lividity disappears on pressure and is due to a vaso-motor paresis and passive congestion. There are numerous small circular cicatrices around the openings of the sebaceous

follicles which are absent in the remaining portions of the spots. The case is presented as an example of the last stage of a pigmentary syphilide, and the noteworthy points are: *a.* The absence of marked pigmentation at present. *b.* The atrophy of the skin. *c.* The dilatation of the vessels. *d.* The cicatricial formation around the sebaceous follicles. *e.* The absence of cicatricial tissue in other portions of the spots.

5. Dr. Winfield presented a case of lupus [1] which had undergone the cancerous degeneration so common to the lupoid growth. The lesion first appeared on the forehead about twenty years ago (the patient is now thirty-three years old); he had been treated by pyrogallic acid, excision, etc., and for a long time it appeared to do well. Recently the scar became the seat of an ulcerative process. Clinically it closely resembled lupus, but on careful examination no bacilli were found, but there were small cells.

6. Dr. Winfield presented a man, seventy-one years of age, with an ulceration on his scalp. There was loss of tissue, both of the soft parts and of the bone. No history of previous syphilitic infection was obtainable. He regarded the lesion as an osteo-sarcoma. with which view Dr. Morton concurred.

Drs. Sherwell and Mosher thought it a syphilitic gumma.

7. Drs. Morton and Winfield presented a case from the Kings County Hospital with the following history: J. D., aged twenty-five, admitted to hospital December, 1892. In the previous September had two small sores on penis, with suppurating bubo, followed soon after by sore throat. About the first of October he had an attack of typhoid fever, which ran the usual course. Habits had always been intemperate. Two weeks before admission he noticed a small swelling at the right angle of lower jaw which kept increasing in size. Soon after submaxillary glands on the opposite side became enlarged and indurated. He also complained of rheumatic pains in right shoulder and both knees, extending about half-way down his legs. A month after admission glands were larger and a rash appeared, beginning on the inside of his thighs, then on his chest, and finally on his face, arms and hands. This rash appeared first as papules, some of which became vesicular and, after drying, left crusts. When the rash was at its height his hands were swollen, blue and cold. Only slight pruritus during the past week. Dr. Morton thought the case to be one of lichen ruber.

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[1] A full report of the case appears in the Journal of Cutaneous and Genito-Urinary Diseases. January, 1886.

Dr. Sherwell did not agree with this diagnosis because the lesions did not have the form and color; there was also the absence of itching in this case. He inclined to the thought that it was syphilitic.

Dr. Winfield remarked that all antiseptic treatment had failed, but that the man had improved under the use of arsenic (the Asiatic pill). The points of differential diagnosis brought up by Dr. Sherwell were very true. As to the color at first—that is, where the rash had existed about two weeks—it was much brighter red. He (Dr. Winfield) raised the question, might it not be lichen ruber modified by syphilis?

GEO. D. HOLSTEN, M.D.,
Secretary.

BROOKLYN SURGICAL SOCIETY.

November 16, 1893.

Presentation of a genito-urinary tract illustrating the condition of tuberculosis of the bladder, with history.

Dr. Pilcher: A man some twenty-five years of age, applied to the Methodist Hospital, coming there for treatment from the central part of the State, the prime symptoms, for which he applied for relief being those of chronic cystitis, although at the same time he had some cough and emaciation, but the severity of his bladder symptoms were so great as to overtop everything else. He had been suffering from these symptoms for more than a year before coming to the hospital.

During a period of ten days he was kept under observation at the hospital, during which time, from every half hour to every hour he would urinate, with great pain, and the urine contained the usual deposits characteristic of cystitis. A cystoscopic examination was made, but owing to the rapid supervention of hæmorrhage it was impossible to prolong the examination to any very great extent, or to derive any special information from it. Upon rectal examination, a thickened condition of the vesiculæ seminales was distinctly defined and a special nodular deposit in the right vesicle was evident to the touch. During these ten days the usual treatment for cystitis, including systematic washing out of the bladder by mild antiseptic agents was kept up, but without any benefit. Examinations of the urinary deposits for the bacillus of tuberculosis were made, but with negative results.

Notwithstanding the failure to find the bacilli in the discharges from the bladder, it was nevertheless believed to be a case of tuberculosis of the bladder. The evident pulmonary trouble gave additional force to this belief.

He was accordingly subjected to suprapubic cystotomy, and in this operation I was for the first time able to avail myself of the suggestion made before this Society a year ago by Dr. Bristow to blow up the bladder with air instead of dilating it with water injected into it, and also at the same time to do away with the use of any rectal colpeurynter. The effort was an admirable success. The manner in which the bladder was blown up and was lifted up above the symphysis was an excellent demonstration of the value of the means that were suggested by Dr. Bristow. It was much more easily done, much more readily accomplished, and the manner in which the bladder projected above the pubes was very much more prominent than in any case which I have ever seen when a fluid was used for the purpose of dilating the bladder.

Further, as an examination of the specimen will show, it is probable that had any attempt been made to dilate this bladder with water it would have resulted in extravasation of its contents on account of the existence of certain diverticula with very thin walls. And at the same time the whole bladder had already lost much of its tone, so that it was like a flaccid bag, having very little expulsory power and not contracting when it was opened.

When the section was made there was also found a small abscess cavity in the supra-vesical space, just behind the symphysis. This was opened first and evacuated, and then the incision being continued the bladder was opened and its contents permitted to escape. The very weak condition of the patient at the time made it unwise for any prolonged instrumentation of the bladder. The granular condition of the mucosa was noted ; it was thoroughly washed out and an iodoform tampon placed in it, the end of the tampon being brought out through the supra-pubic opening. The patient rallied well from the operation. The tampon was withdrawn on the third day and from that time until the time of his death, which was some six weeks thereafter, his bladder symptoms were very greatly relieved. The drainage through the supra-pubic opening was sufficient to enable the bladder to be readily relieved. A portion of the time a double drainage tube was kept in the opening, and at other times a simple iodoform gauze mesh was placed in the opening. The bladder was washed out daily ; and at varying intervals, averaging about twice a week, a half-ounce of a ten per cent. iodoform emulsion was injected into the bladder and permitted to remain. The relief to his sufferings was exceedingly gratifying, so that from the time the opening was made into the bladder until his death, no longer did his bladder symptoms play any especial part in his condition.

He continued, however, steadily to sink and to waste from his pulmonary complications, and at the end of six weeks he died from general asthenia.

The post-mortem examination revealed diffuse tuberculosis of both lungs, with advanced destruction of portions of them ; with diffuse tubercular deposits in the small intestines, and the condition of the bladder which I am now able to present to you.

The bladder specimen shows a diffuse granular condition of the mucous membrane throughout its whole extent. This is less marked in the mucous surface of the trigone, the smooth reddish surface of which is suggestive of recently healed ulceration. The ureters, however, are free from disease ; nor is there any involvement of either kidney.

An additional point of special importance is, that on either side there is an attachment of a loop of small intestine to the bladder, and by long traction the inflammatory adhesion has been elongated so as to form a band, and by the traction of these adhesions a diverticulum from the bladder has been developed on each side.

The chief points that I wish to lay stress upon in connection with this specimen are, first, the existence of so extensive a disease and so long continued disease, with failure on the part of the pathologist to discover the tubercular bacilli in the discharges. And second, the very marked relief which was experienced to the local sufferings by the supra-pubic section.

It is now just about two years since, in the case of a young man some twenty-one or twenty-two years of age, of tubercular antecedents, and of bladder symptoms indicating the presence of profound disturbance, supra-pubic cystotomy was done by me, and a patch of about the size of a half-dollar at the lower lateral wall of the bladder was revealed, presenting a velvety surface deeply congested. In none of the discharges at any time were any tubercular bacilli discovered. For several months drainage through the supra-pubic opening was continued. Finally, the fistula was allowed to close, all his symptoms subsided, and up to the present time, nearly two years, he remains well.

In yet another and similar case, a young man likewise, full four years ago, a similar excellent result and apparent cure were accomplished by the same means. These cases I described and referred to in a paper which I published last winter.

Dr. Wood: This has been a valuable pathological lesson and I am very grateful for it. There is one case under my notice that has one encouraging point that I might mention. A young woman giving symptoms indicating this disease, was subjected to a supra-pubic cystotomy some three years ago; a small ulceration was found, scraped, and treated with iodoform. The symptoms subsided, and the supra-pubic wound was allowed to close.

A few months afterwards she suffered a return of the same symptoms. The bladder was again opened in the same manner; the ulcerated spot was again recognized as before, except that it was of a little larger size. It was again scraped and treated with lactic acid this time in addition to the iodoform. At least one year after the second operation there had been no recurrence of any symptoms whatever. That is encouraging and would lead us to try, perhaps, more than once in a case where the lesion was limited.

Dr. Warbasse: I wish to add my testimony to the value of air inflation of the bladder for supra-pubic cystotomy. I assisted at this operation and was especially impressed with the great advantage of using air instead of the introduction of water into the bladder.

The Doctor has alluded to the fact that no tubercle bacilli were found in the urine. Inasmuch as the search was made by myself, I am especially interested in that part of the discussion. In a tuberculous cystitis which has existed for any considerable time, we are much less apt to discover the specific microörganism of the inflammation than when the search is made in the earlier stage of the inflammatory process. In this case especially, aside from a large amount of necrotic dèbris and pus there was an excessive amount of mucous; and a search for tubercle bacilli in urine of this sort is a very unsatisfactory task. I examined some seven preparations and in none of them were there tubercle bacilli. I feel, however, in regard to cases of this sort, as Prof. Koenig; who says, that a man who is familiar with ground-hogs' holes does not necessarily have to see a ground hog on top of the dirt heap to know that the hole was made by a ground hog; and so in this case, the indications of tuberculosis were so very clear that the Doctor knew without seeing any tubercle bacilli, that he should find tuberculosis of the bladder.

Discussion following the reading of Dr. Wood's paper entitled, "The Initial Symptoms of Tubercular Arthritis of the Hip, with Report of Cases."

Dr. Pilcher: I have appreciated very highly the clearness of the presentation of the facts that are embodied in this paper this evening, and cannot esteem it otherwise than valuable and suggestive to us. There are very few of us that can draw from so large a field of experience as that which the author of the paper has been able to enjoy, from which to draw the statements which he has made to us, and we appreciate the work which he has done.

I do not know that I can make any better comment upon the paper than to relate an experience of mine during the present week. A child, four years of age, was brought to me for examination. Last December at Christmas time she was the subject of an attack of measles. Early in February she began to limp and complained of pain in her knee. She was permitted to go without any rational treatment from that time; no diagnosis was made and no rational treatment instituted from that time until the present, a period of eight months. She was brought to me to know what the matter was, for though all pain in the knee had disappeared, she persisted in being very lame, would hardly touch the toes to the ground and would put no weight whatever upon her limb. Upon stripping her and examining her, it was evident that there was a certain amount of atrophy of the whole limb. There was no lack of muscular power, however, in any of the groups of muscles, no disease at the ankle or knee joint, the flexion of the limb upon the abdomen was very free. While the exact methods of examination which those who are in the habit of systematically examining large numbers of patients who are affected with hip-joint disease were not employed, yet the flexion of the side of the affected part upon the abdomen was practically the same as that upon the sound side. Extension to 180 degrees was also perfect. There was no tilting of the pelvis when the leg was brought down flat and made to lie by the side of its fellow. Both abduction and adduction were, however, restricted.

No evidence of trouble with the sacro-iliac articulation was elicited. Pressure made from the foot, concussing the hip joint by means of blows upon the foot through the limb, did not elicit any particular outcry but pressure upon the trochanter was resented and caused pain. There was a fulness over the joint noticeable from the anterior surface and an indistinct sense of fluctuation, while the whole upper part of the thigh instead of being atrophied, was apparently somewhat swollen. Notwithstanding these symptoms, and these were all the symptoms that could be elicited at that time, after so long an interval from the beginning of this trouble, I had no hesitancy in coming to the conclusion myself that there was a tubercular disease at the hip. My belief was that it was probably in the neck of the femur, while the synovial sac was probably not involved. I submit the case to the judgment of the colleagues present here to-night as to their criticism upon the decision which was arrived at.

I have instituted the treatment which may give us the three cardinal points which have been mentioned by the writer of the paper, and we shall see what the future will bring forth in this particular case.

Certainly cases which do not present full characteristic symptoms which we are accustomed to cluster about disease of the hip joint, do present themselves to us from time to time, and we are certainly indebted for the clear manner in which the writer of the paper has warned us of the danger of neglect in such cases.

Dr. Rae : I suppose all of us in our private practice, and undoubtedly those of us who have anything to do with clinical work in dispensaries, will appreciate the usefulness of the points in diagnosis which are indicated by the subject of the Doctor's paper. The sad fact about the condition is that the majority of these cases come to us when the conditions are so far advanced that we are handicapped. My experience has been limited to a few cases outside of the dispensary and hospital. Dispensary cases are unsatisfactory from the fact that it is simply impossible to control them, and those cases that we are able to get into the hospital, while they obtain a certain amount of benefit, the result is a matter of doubt, in consequence of inability to learn subsequent history.

Dr. Warbasse : The great value of the paper to which we have had the pleasure of listening, seems to me to lie in the fact that the author has urged upon us to apply the treatment of tuberculous disease of the hip joint to cases of this sort, even when there is a possibility of doubt as to the diagnosis. And in view of the outcome of some of these cases which he has related, I think the point is especially emphasized.

Another point, the differentiation between coxitis and congenital dislocation of the hip joint. It seems hardly possible that a congenital dislocation of the hip joint could be mistaken for a tuberculous coxitis ; and I am interested that Dr. Wood has reported this lesion as being much more frequent than is generally supposed. It has been my fortune to observe five cases of double, congenital dislocation of the hip joint, and none of these cases, it seems to me, presented any pronounced similarity to tuberculous hip-joint inflammation.

Dr. Wunderlich: It has been very instructive to me to listen to the valuable paper of Dr. Wood, and I believe with Dr. Warbasse that the most important and practical feature of the paper is, Dr. Wood pointing out the importance of instituting thorough treatment for hip disease when a probable diagnosis only can be be made. When the cases have progressed so far that the diagnosis is unquestionable, the treatment must necessarily be very protracted, while at the time when a probable diagnosis can be made, the chances for successful treatment are much better, and it can be accomplished in a shorter time.

Dr. Wood: Just a word in regard to Dr. Warbasse's remark, that there is no difficulty in diagnosing these cases. There is not any difficulty if the child has walked a year or even a few months. Then the weight of the body has forced the femur far enough up so that it can be recognized in its new position. But there are cases when it is very difficult to decide. In some cases I think it cannot be done, but it is only in those who are just beginning to walk that the difficulty exists.

Dr. Pilcher spoke of the location of the disease. I wish the diagnosis of the exact location was possible for the reason that it is so important in regard to prognosis, but I do not think it is. I have now had a case under treatment for sometime in this city that I got very early and where I thought I was going to get an absolutely perfect result. I have as far as motion is concerned, but the leg is a little short, the shortening is in the femur. That proves that the disease is in the epiphysis. I think the cases of synovial tuberculosis will often give a perfect result, but in epiphyseal disease there is always a shortening, even if the motion is perfect.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

CONCERNING THE MERRITT H. CASH PRIZE FUND.

For the information of all concerned, I desire to state that the Medical Society of the State of New York offers a prize of one hundred dollars, payable from the Merritt H. Cash Prize Fund, for the best original essay on any medical or surgical subject.

The conditions are: That the competitor shall reside in the State of New York and shall be a member of a County Medical Society; that the essay shall be either printed or type-written; that each essay shall be designated by a motto on the title page, and accompanied by a sealed paper bearing the same motto and enclosing the name of its author, in order that the name of the successful author alone may be ascertained; and that all essays shall be sent to the Chairman of the Committee on Prize Essays, prior to January 1, next.

The Committee on Prize Essays is: Dr. Franklin Townsend, Jr., 2 Park Place, Albany; Dr. A. Walter Suiter, Herkimer; Dr. Charles Stover, Amsterdam.

Secretaries of County Medical Societies are requested to communicate this to the members of their Societies.

F. C. Curtis,
Secretary.

Secretary's Office,
17 Washington Ave., Albany, N. Y.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.

G. Bassini. A new operative procedure for the radical cure of femoral hernia. (Padua, Angelo Draghi, 1893. Centralblatt f. Chirurgie, No. I., 1894, p. 15.)

The method is based upon an anatomical study of the parts involved in the normal state, as well as when femoral hernia is present. It possesses the advantage of simplicity as well as permanency in its results.

The crural canal is funnel-shaped, with its base directed upward. It is closed by the cribriform fascia in direct connection with the deep layer of the superficial fascia, Poupart's ligament and the pectineal fascia. According to Bassini, neither the falciform process of the fascia lata nor that portion of the aponeurosis of the external oblique muscle known as Gimbernat's ligament exists as such, but is formed in the process of development of a femoral hernia, the lamina cribrosa being forced apart and receding with the advance of the hernia. The point at which this occurs is the narrowest portion of the funnel; and it is likewise here in the oval ring, the greatest diameter of which passes in an oblique direction from within, and above outward and downward, that incarceration takes place. In demonstrating the point of incarceration, Bassini made a cast by filling a crural hernia with a liquid plaster of Paris mixture and permitting it to harden in situ. The lower border of the ring is marked by the point of entrance of the saphenous vein into the crural vein. This location of the vein, as well as the rather resisting sheath of the latter, explains why, in case of incarceration of crural hernia, these veins are never compressed. Under normal conditions the unyielding character of Poupart's ligament and of the fascia lata, together with the lamina cribrosa of the deep layer of the superficial fascias prevent, the occurrence of hernia. On the other hand, the relaxation of these structures, as well as the yielding to pressure and recession of the fibres of the cribriform fascia permits the formation of the hernia.

The object of Bassini's operation is to restore the normal location and tension of the displaced and relaxed structures. He accomplishes this in the following manner: The sac, together with the fascia lata and pectineal fascia, is exposed by an incision which is placed parallel with and just below Poupart's ligament. The sac and its neck are isolated by blunt dissection to a point beyond the crest of the pubes. The sac is opened and its contents reduced into the abdominal cavity; the neck of the sac is twisted, caught by a clamp to prevent untwisting, a ligature passed through the twisted portion and the neck securely ligated. The portion of the sac beyond the ligature is now cut away and the stump replaced, so as to expose the parts forming the canal and the oval ring. The latter is now closed as follows: The first suture is applied close to the spine of the pubes and passes through Poupart's ligament, after which the latter is somewhat elevated, and the suture is made to include the pectineal fascia at the level of the pelvic crest. The two following sutures are placed in a similar manner, approaching the crural vein; the fourth includes the falciform fold of the fascia lata and the pectineal fascia. None of the sutures is tied until all are placed in position. In securing the sutures, Bassini ties first those placed above. A C-shaped suture-line arises in consequence of the tightening of the first three sutures, which is considerably depressed at its middle. The skin is now sutured separately. The operation occupies from fifteen to thirty minutes. Patients are allowed up after ten days; no truss is worn.

Bassini's experience with this method includes fifty-four operations in fifty-one individuals (forty women and eleven men). The youngest of these was seventeen and the oldest seventy. Recovery took place in all cases without complication. Eight left the hospital after nine days; twelve after ten days; five after eleven days; and four after twelve days. The remaining twenty-one left the hospital after from thirteen to twenty days. None of the patients has since worn a truss and all are able to work. The time of observation extends over periods varying from three to nine years in twenty-seven cases; between two and three years in fourteen cases; the remainder for less than two years. In at least forty-one cases the cure remained permanent for periods extending from two to nine years.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics, Long Island College Hospital.

AIR EMBOLISM IN PLACENTA PRÆVIA.

Henck (Zeitschr. f. Geb., u. Gyn., Band xlviii.. 1 H.) Olshausen, in a recent paper on this subject, has suggested that the sudden deaths frequently observed during version in placenta prævia are probably due to air embolism. Kramer and Kruckenberg have each published a case in which the cause of death was found in the entrance of air into the veins. The author has recently encountered a similar experience. The patient was a primipara twenty-eight years of age. Hæmorrhage began in the seventh month. On admission to the hospital the cervix was found dilated sufficiently to admit one finger, and the placenta presenting centrally over the os internum. Owing to repeated recurrence of hæmorrhage, version was done under chloroform. The entire hand was carried into the vagina. Two fingers were passed into the uterus, one edge of the placenta separated and the membranes broken. A foot was brought down with difficulty with the aid of external pressure. The chloroform was then discontinued. A violent pain occurred and the woman suddenly became pulseless and profoundly cyanotic. Various restorative measures, including rhythmical pressure over the cardiac region and artificial respiration, were tried but to no purpose. The respiratory movements became slower and slower and finally ceased altogether, within from three to five minutes after the pulse stopped. The child, which was dead, was still undelivered. At the autopsy two hours after death, air bubbles as large as a hazel nut were found in the right jugular vein. Bubbles of air were demonstrated in the right heart by opening its cavities under water. The coronary vessels contained air. The myocardium was not impaired. Air bubbles were also to be seen in the right spermatic vein. The author believes that the air introduced into the uterus with the hand was forced into the venous sinuses on the occurrence of vigorous uterine contractions.

Henck thinks the possibility of air embolism fully established by his own and the other two cases to which he alludes. The fact that after similar deaths, air has not always been found in the heart and veins is due, he believes, to faulty methods of examination.

THE PROPHYLAXIS OF BLENORRHŒA NEONATORUM.

Von Erdberg (Centralblatt für Gyn., 1893, No. 24, Br. Med. Jnl., Part xxxv.) discusses methods for the prophylaxis of ophthalmia neonatorum. He believes with Von Brunner that only those cases can be counted blenorrhœal in which the Neisser's gonococcus is found—an opinion which has been recently combated by different writers. Infection at birth he considers of rare occurrence, and intra-vaginal infection has not been proven.

The average time of incubation of the disease was from two to five days; cases in which suppuration begins at a later period after birth must be ascribed to late infection. The best prophylactic he thinks is a 1 in 5,000 sublimate solution : it causes scarcely any reaction. Oppenheimer has shown that the gonococcus is killed by a solution of the bichloride of mercury in strength of 1 in 30,000. In fully 75°/₀ of new-born children no prophylactic instillation is called for. The thorough disinfection of the vagina before head comes down makes it unnecessary to use anything but distilled water in the eyes. The author, however, thinks it wise, as a precautionary measure, to cleanse the external surfaces of the eyelids and the immediate surroundings with a 1 in 1,000 sublimate or 1 in 4,000 iodtrichloride solution as soon as the head is born. In the presence of gonorrhœal discharges, this treatment is imperative.

SELF-INFECTION IN CHILD-BED.

F. Ahlfeld in a paper published in the Zeitschrift f. Geb. und Gyn., B. xxvii, H. 2, reaches the following conclusions :

1. The occurrence of fever in child-bed, originating without previous examination, cannot be longer doubted.

2. These fevers are, for the most part, unimportant, though severe and even fatal cases are probable.

3. In well conducted institutions the number of fever cases resulting from self-infection in child-bed is larger than those caused by infection from without. The latter, however, are usually of a severer type.

4. The percentage of morbidity and mortality in an institution in which due care is taken to prevent infection from without, depends on separating the primiparæ from the multiparæ and on the number of operative cases.

5. Preliminary disinfection of the birth canal is an important prophylactic measure.

6. Sublimate remains the best disinfectant.

7. The seat of infection is generally not the external genitals, but rather the cervix and endometrium.

8. Most fever cases in child-bed are to be considered as resorption fever. They result principally from retention of the infectious child-bed secretions.

9. The seat of most active absorption is the uterine mucosa; next, that of the vagina.

10. The poison taken up is, as a rule, promptly eliminated—probably through the urine.

11. Pathogenic microörganisms are always to be found in the vagina. They need only a favorable culture medium to develop their activity. This they find in the decomposing contents of the vagina and uterus after labor.

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY.

Acute Inflammation of the Antrum of Highmore. (Brit. Med. Jour., February 3, 1894).

Felix Lemon reports a personal experience with an unusual sequela of influenza, acute inflammation of left antrum. During the severe catarrh following his influenza, he noted sudden sense of fullness in left cheek, which increased to intolerable pain in zygomatic region, with swelling, redness, and extreme tenderness. Frontal neuralgia, as found in chronic inflammation of maxillary sinus, was absent.

A profuse serous flow from left nostril was constant. While blowing the nose, a sudden discharge occurred of greenish pus, about one-half ounce in quantity. At intervals this purulent discharge continued. The pain disappeared ; the temperature, which had risen to 100.5°, became normal. Examination by Prof. Fraenkel, failed to prove any abnormality of the nose : transillumination of face showed both antra to be translucent, but the left pupil remained dark.

Cure was spontaneous in a few days. Lemon had never before seen a case of acute inflammation of antrum. Fraenkel, Landgraf, and Rosenburg report a few cases, always following influenza ; cure in every instance, but one was spontaneous.

PATHOLOGICAL AND CLINICAL FEATURES OF ATROPHIC RHINITIS.

British Laryngolog. and Rhinolog. Association.

Wyatt Wingrave's careful consideration of this much discussed subject is worthy of attention.

Atrophic rhinitis is defined to be "a progressive and persistent form of dry rhinitis, characterized by a shrinking of the mucous membrane, which tends to invade contiguous chambers, and is accompanied by the formation of crusts with more or less fœtor of a special character."

From histological examinations made of tissue from affected subjects, the symptoms presented may be classified as follows :

I. TRANSFORMATION OF THE COLUMNAR CILIATED AND SPECIAL OLFACTORY CELLS INTO STRATIFIED SQUAMOUS EPITHELIUM.

Although this condition occasionally is found in other diseased conditions of the nose, it may be regarded as a constant feature in atrophic rhinitis. The statement of Bosworth, "That these epithelial cells may become active inflammatory corpuscles," does not find any proof from the author.

II. DISAPPEARANCE OF THE HYALOID BASEMENT MEMBRANE.

This is characteristic. In other forms of rhinitis this membrane remains generally intact.

III. THE PRESENCE OF SPECIAL HYALOID BODIES AND PIGMENT MASSES.

One of the most interesting features of this disease. These small, refractive, rounded, homogeneous bodies, are situated mostly in the interlobular tissues of the glands, in adjacent lymphoid tissue, and occasionally among the surface epithelial cells. They increase with the severity of the complaint. They vary in size from one two-thousandth to one eight-hundredth of an inch. They may be encapsulated or free. They take rubin and orange stains, but resist hæmatoxylin and other nuclear stains.

The nature and origin of these masses is undecided. They are not remains of broken-down cells and nuclei due to retrograde metamorphosis as suggested by Fraenkel, nor due to the propagation of bacilli as stated by Stephanow. They fail to respond to the osmic acid stain, which precludes their being composed of fatty globules. The author suggests : "There is a strong resemblance in staining reactions to the substance which constitutes the hyaline basement membrane, everywhere underlying the surface epithelium in the normal state, but which in this disease disappears."

Pigment masses are not constant, but may appear in irregular clusters in the connective tissue cells.

IV. CHANGES IN THE GLANDS.

These changes may be a simple cloudy swelling of the secretory cells, or advanced to a disorganization of the acini by the ingrowth of small cell inflammatory tissue. Mucoid and keratinoid degenerations are most frequent.

V. CHANGES IN THE LYMPHOID TISSUE AND BLOOD-VESSELS.

Lymphoid change is a constant factor of this disease. In the early stage the number of lymph corpuscles is increased, later on decreased in number but increased in size.

The capillary loops become entirely obliterated. The cavernous spaces become less distended, and from decreasing blood supply, atrophy.

The afferent vessels undergo a process of endarteritis obliterans.

VI. CHANGES IN THE BONES.

No specific changes demonstrated.

The walls of the bony cancelli were attenuated and osteoelastic absorption was observed to a certain degree.

INCIDENTAL PATHOLOGICAL CHANGES.

Disappearance of adjacent lymphoid structures uniformly occurs. In fifty-six cases out of sixty, the faucial and pharyngeal tonsils had entirely atrophied ; in remaining four they were very small.

The teeth were generally decayed. In twenty-eight cases the thyroid gland could not be perceived by palpation ; in two cases it was enlarged.

Non-suppurative middle-ear disease occurred in eight instances. Bare bone was felt in ten cases on probing.

Anæmia was a prominent symptom in twenty-seven of the sixty cases. Of the sixty cases the majority dated onset of the complaint from puberty. Forty-nine were females and eleven were males.

With the females amenorrhœa and leucorrhœa were almost a constant associate. During the menstrual period the nasal difficulty was aggravated. History of tuberculosis was found in thirty-seven cases ; abscess of the neck in eighteen. In eighteen cases no hereditary taint could be found. Fœtor was noticed in fifty-eight cases by the observer ; in half that number by the patient. Complete loss of the sense of smell was found in thirty cases.

Microscopic examination threw but little light upon this subject. Staphylococcus, diplococcus, and leptothrix were the most common organisms found. The discharge was determined not to have been pus, for no characteristic cells were found. Supranasal pain was observed in thirty-eight cases. Only four cases gave a reliable history of prolonged nasal discharge in early life.

No association was found with the specific fevers or with suppurative ethmoidal troubles. Regarding the ætiology of atrophic rhinitis, the author apparently considers it a chronic sclerotic process from its incipiency. Initial enlargement of the tissues affected may occur, but they resemble the inflammatory thickening which frequently is noted in sclerotic processes elsewhere in the body. In hypertrophic rhinitis the enlargement is due to an increase of erectility and an increase in size of cavernous spaces. Hypertrophic rhinitis is thus regarded as never being the antecedent of the atrophic process.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon Brooklyn Eye and Ear Hospital, Visiting Ophthalmologist to Kings County Hospital.

ON AFTER-IMAGES.

Snellen (Ber. ueb. d. 23te Vers. d, Oph. Ges. Heidelberg, 1893) has experimented with retinal after-images, and concludes as follows :

1. Momentary illumination of the retina produces after-images in which three phases may be distinguished; i. e., a simple positive of the original image lasting up to one-third of a second, a negative contrast image of somewhat longer duration, and lastly, a faint image visible for several seconds, usually of a reddish brown color,

2. The sharp definition of the first two phases is directly proportional to the shortness of the illumination.

3. The third phase can only be perceived when all outside light is excluded. Otherwise the two impressions (that of the after-image and that due to the illumination) neutralize each other.

4. If one fixes steadily a moderately lighted surface, this will appear alternately darker and lighter in consequence of retinal fatigue with simultaneous regeneration of function.

CHANGES ATTENDING THE FORMATION OF FIBRIN IN THE AQUEOUS.

Greeff (Ibid.). Ordinarily the aqueous humor contains neither fibrin nor albumen, but if evacuated the re-accumulated aqueous is found to be rich in both, and will coagulate on standing. Greeff enucleated rabbits' eyes at varying intervals after paracentesis corneæ, and regularly found, on examination, changes in the epithelium covering the ciliary processes. The epithelium was raised from the underlying tissue in the form of little blisters, which were filled with coagulable material. Increase in size of these blisters was followed by their rupture, their contents being discharged into the posterior chamber. Their contained fluid was undoubtedly derived from the numerous blood-vessels in the ciliary processes. This would correspond with Weigert's belief that fibrin formation will only occur when areas over a capillary layer become denuded of epithelium; in other words, that the fibrin forming material will not pass through intact epithelium. The regeneration of these areas is probably due in part to marginal proliferation, but to a greater extent to replacement of the separated layer of epithelium. It is generally conceded that the aqueous is secreted by the ciliary processes.

A NEW SYMPTOM OF COMPLETE FACIAL PARALYSIS.

Goldzieher (Ibid.) describes as a new sympton of complete facial paralysis cessation of the secretion of the lachrymal gland. This gland has been supposed to be supplied by the trigeminus, but the author adduces cases showing not only that facial paralysis is accompanied by cessation of secretion, but also that stimulation of the facial has resulted in profuse secretion. Further, the complete removal of the trigeminus trunk with the Gasserian ganglion was not followed by alteration in the lachrymal secretion. In all cases of total facial paralysis with involvement of the soft palate, it was found that crying upon the affected side was impossible.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

PREVENTION OF SURGICAL SHOCK.

Goodell (Annals of Gyn. and Pæd., Jan., 1894,) in operations about ovaries, calls attention to shock by pinching of ovaries in their removal. He has repeatedly seen the pulse fall when they are caught by forceps.

CATGUT LIGATURES IN HYSTERECTOMY.

American Text-book of Gynæcology. J. M. Baldy, editor, pages 388.

In comparing catgut with silk he says: "If applied directly from the alcoholic solution in which it is kept, and unmoistened by water, catgut swells up immediately, and binds more firmly than before the tissues around which it is tied. It is therefore less liable than silk to slip off. We have indeed, never known a catgut ligature to slip off, even when applied to the thick and short broad ligaments of a fibroid tumor of the womb and to its very large blood-vessels, which have been tied during the operation of supra-pubic hysterectomy."

Then, again, in vaginal hysterectomy the catgut ligature has this very great advantage over the silk ligature; that each ligature high or low, intra or extra-peritoneal, can be cut off close to its knots. Hence these knots left in the abdominal cavity are not only absorbable, and therefore less likely to become foreign bodies, but by sewing up of the wound in the vaginal roof, also by catgut, they are cut off from the vagina, and therefore from vaginal contamination.

Lastly, all the ligatures will take care of themselves by absorption, and do not need, weeks after the operation, repeated vaginal examinations and repeated tugs before they can be dislodged.

MISCELLANEOUS.

BROOKLYN VITAL STATISTICS—FIRST QUARTER OF 1894.

BY GEORGE E. WEST, M.D.,
Secretary Department of Health.

	Jan.	Feb.	Mar.
Births reported	1,882	1,524	1,706
Deaths reported	1,554	1,533	1,566
Cases Reported.			
Smallpox	70	65	149
Measles	224	485	856
Scarlet fever	235	231	354
Diphtheria	207	242	268
Deaths.			
Smallpox		1	
Measles	9	10	20
Scarlet fever	25	20	48
Diphtheria	91	81	87
Croup	31	26	30
Whooping-cough	8	10	21
Typhoid fever		8	5
Diarrhœal diseases	9	9	11
Phthisis	207	174	171
Pneumonia	315	255	214
Death Rate.			
Brooklyn	18.23	19.9	18.4
New York	22.35	23.0	22.6
Philadelphia	25.59	21.8	19.9
London	25.70	19.3	20.3
Paris	21.18	22.4	25.0

Estimated population, 1,003,781.

Dr. Edward C. Mann has removed his private sanitarium, Sunny Side, from Flatbush to 801 Madison Avenue, New York, where he is prepared to receive cases of disease of the nervous system, of inebriety, or the morphine habit.

NEW BOOKS AND BOOK NOTICES.

A Manual of Practical Hygiene Designed for Sanitary and Health Officers, Practitioners and Students of Medicine. By W. M. L. Coplin, M.D., Adjunct Professor of Hygiene, Jefferson Medical College, etc., and D. Bevan, M.D., Instructor in Hygiene, Jefferson Medical College, etc., with an introduction by H. A. Hare, M.D., with 140 illustrations, many of which are printed in colors. Philadelphia: P. Blakiston, Son & Co., 1893. Pp. 456. Price, $4.00.

The authors have succeeded in giving to those for whom it was intended a very complete and useful book. There is hardly a subject in the domain of Sanitary Science which has not received attention. On some points we can not agree with them, but the differences are those on which a variety of opinions is, perhaps, permissible. As an illustration of this, we would refer to a statement on page 86 in which, in discussing contagious diseases, the authors say: "The question will often arise during the tender years of life whether it be advisable to allow the child to have the usual contagious diseases of childhood, such as chickenpox, measles, mumps, etc. While it is never wise to rush into danger, in the case of a good, strong, healthy child there is no reason why an effort should be made to prevent its acquiring any of the mild contagious diseases of childhood. Every care, however, should be exerted under all circumstances to keep the child away from scarlet fever, diphtheria, and, of course, smallpox." Now, we do not propose to criticize this statement hypercritically, as we might if we asked what difference it made whether a child was "good" or not, but we do object to the inference that measles is a mild disease, and that "There is no reason why an effort should be made to prevent" a child from acquiring it. The reviewer had occasion, fourteen years ago, to combat this view in a paper entitled "Measles Not a Trivial Disease," and he has seen no reason to change the opinion expressed in the title. He thinks that a disease which caused 42,139 deaths in five years, as measles did in England, is a disease to be shunned. He also thinks that in thus advising, the authors are not consistent with a statement on page 58 where the following occurs: "What diseases do, and what do not demand quarantine or isolation is a polemical subject, and we content ourselves in prescribing rules for the guidance of physicians, which, if they err, err on the side of safety."

In discussing germicides the authors appear to us hardly logical in the inference that "When typhoid fever bacilli can be cultivated in a one-half per cent. solution of carbolic acid, one is to doubt the efficiency of a five per cent. solution as a germicide:" i. e., one ten times stronger. They further state that they "cannot for a moment believe that solutions weaker than ten per cent. are to be depended upon."

On the subject of carbolic acid, Dr. Sternberg, the highest American authority, writes "The Committee on Disinfectants says: 'A five per cent. solution of carbolic acid may be used instead of the chloride of lime solution, the time of exposure to the action of the disinfectant being four hours.' This recommendation is made in view of the fact that in those diseases in which it is most important to disinfect the excreta *the specific germ does not form spores. This is now believed to be true of the typhoid bacillus*, the spirillum of cholera, the bacillus of diphtheria, the bacillus of glanders, and the streptococcus of erysipelas; and it has been shown by exact experiments that *all of these pathogenic bacteria are destroyed in two hours by a one-per-cent. solution, or less of this agent*." (Italics, ours.)

The International Sanitary Conference at Rome (1885) recommends a five per cent. solution of carbolic acid, and places this among the "strong" solutions, which are to be used for the disinfection of excreta.

AN AMERICAN TEXTBOOK OF THE DISEASES OF CHILDREN. By AMERICAN TEACHERS. Edited by Louis Starr, M. D., assisted by Thompson S. Wescott, M.D. Philadelphia: W. B. Saunders, 1894. Pp. 1190. Price $7.00.

A text-book is distinguished from an encyclopædia in that the former aims at a unity of structure while the latter is a storehouse of information, not necessarily systematically arranged. When we note that this "text-book" is written by sixty-three authors, the question at once arises, how can this be other than an encyclopædia, and hence lack that harmony of teaching which is one of the requisites of a "text-book?" This is only possible where the editor has exerted a strong moulding influence. Dr. Starr, the editor, is recognized as an authority in the department of pediatrics, and by some alchemy this work bears his stamp from cover to cover. It therefore has a consistency of teaching which works by a plurality of authors rarely have to so great a degree as does this one. In its fullness it is an encyclopædia, but the plan of the work is that of an exhaustive treatise, which is most admirable in its arrangement. The first excellent point to be noted is, that it is divided into parts, each devoted to the consideration of a comprehensive subject or to a physiological system. Under part III, for instance, are treated the Acute Infectious Diseases. Among these are classed diphtheria. As this disease often leads to stenosis of the air passage, at this place are introduced the surgical treatment of this condition: Tracheotomy and intubation of the larynx. Under part IV, the Diseases of the Digestive Organs, is introduced the surgical treatment of the diseases of the cæcum and appendix by so eminent a surgeon as Dr. Ashhurst. The article upon Intussusception is also from his pen. Both of these contributions are to be strongly commended since they are conservative in tone, yet give admirable advice in regard to operative interference. In the operation of enterectomy no mention is made of the use of Murphy's button, which has the great merit of shortening the time of operative procedure, which is a most important element in all operations within the abdominal cavity, especially of children.

The defects of composite authorship is shown in the two sections devoted to the Diseases of the Nervous System, which cover over two hundred pages, while the section on Diseases of the Heart comprises a little over twenty pages. The part on the Diseases of the Nervous System is one of the most complete and valuable in the book. It is a treatise in itself. Of the twenty-three pages on Diseases of the Heart, five are given to congenital affections of the heart, leaving but fifteen to the consideration of the subject of Organic Diseases of the Heart. But it must be said that the chapter with this latter caption is most admirably written, concise and complete.

Part X, devoted to the consideration of Diseases of the Genito-Urinary System is written by seven authors, each of whom gives the results of careful study of the subject he writes upon. Under the subject of Incontinence of Urine, Dr. Buckingham writes sensibly upon its connection with phimosis, not sanctioning the exaggerated view that it is the sole cause, and that all cases of incontinence in males should be treated by circumcision. He has met with several cases in circumcised Jews, and it often occurs in girls. It is not to be denied that this may be a cause, but one should not be satisfied to submit his cases to the operation unnecessarily. Too high praise cannot be given to the chapters by Dr. Tyson on Diabetes mellitus, D. insipidus, and Lithiasis ; and that by Dr. Danforth on Acute and Chronic Nephritis, and Amyloid Disease of the Kidney. Prof. J. Wm. White writes the chapter on Vesical Calculus, and also that upon Gonorrhœa and Vulvo-Vaginitis. It is needless to say that they add much to the value of a book in which they appear. The chapter on Phimosis, Adherent Prepuce, and Paraphimosis is admirably written by Dr. Wharton.

The parts on Diseases of the Skin, Diseases of the Ear, and on Diseases of the Eye are each written by recognized specialists in their several departments. They close the most elaborate, as well as most complete work of a single volume upon the subject of Pediatrics in the language. It is doubtful whether any work exists that is more satisfactory or valuable to the general practitioner or the specialist in this department. An admirable index makes easy reference to the many subjects and clinical points with which the work abounds. FRANCIS H. STUART, M.D.

SYPHILIS IN THE INNOCENT. (Syphilis Insontium.) Clinically and historically considered with a plan for the legal control of the disease. By L. Duncan Bulkley, A.M., M.D., Physician to the New York Skin and Cancer Hospital, Consulting Physician to the New York Hospital, lately Professor of Dermatology to the New York Post-Graduate Medical School and Hospital, etc. The essay to which the College of Physicians of Philadelphia in 1891, awarded the Alvarenga prize for the best memoir on any medical subject. New York : Bailey & Fairchild, 24 Park Place, 1894.

The author and collaborators in the work of editing this volume, have shown an immense amount of industry and research for which he and they should be complimented, and undoubtedly the work itself deserves the commendation received from the donors of the Alvarenga prize in 1891. The amount of bibliographical codification and indicia is astonishing, and takes about one-half of the whole volume. Still the practical question will come up, Are the effect here obtained and scientific value commensurate with the effort made? We are inclined to think no one in the profession can be ignorant of, or underrates, the ever-present possibilities and dangers of syphilitic infection of the innocent; and even among the laity too, as it would seem to us, at any rate of the English and German speaking races, there seems to be almost a superstitious fear of the inoculability of every skin and mucous membrane lesion, sometimes even almost ludicrous in its manifestations.

The number of tabulated cases given as personal experience by the author is large, and agrees in that respect with his relative experience in other dermatological matters, but might have been omitted without special loss to the book. To our minds the best part of the volume lies between the pages 135-205, in which the special causes and conditions, etc., of innocent infection are considered, and a plan propounded for control of "Syphilis Pravorum" is given. The statistical, etc., part of the volume will always be of use, and as aforesaid will serve as a valuable bibliographical index for compilations, or quotations by other authors. S. SHERWELL.

ILLUSTRATED PRICE LIST.

JOHNSON & JOHNSON, Manufacturing Chemists, of New Brunswick, N. J. have issued a special illustrated price list for 1894, which contains a mention of all the products of their factory. It would be interesting to compare these thirty-two pages with a list published before the days of antiseptic surgery; we imagine that in no more striking way could the progress of medical science and art be illustrated.

THE PHYSICIAN'S BEDSIDE RECORD (Revised Edition) with Dietary. By GIDEON C. SEGUR, M.D. The Plimpton Manufacturing Co., Hartford, Conn. Price, 10 cents each; $1.00 per dozen.

This record which has now reached its fortieth thousand is a very convenient form of keeping the history of a case, with the pulse, temperature, respiration, etc. Accompanying it is a dietary in which minute directions are given for the preparation of almost everything which can be needed in a sick room.

LONGEVITY, WITH A LIST OF PERSONS KNOWN TO HAVE LIVED ONE HUNDRED YEARS OR MORE. By Archer Atkinson, M.D., Baltimore, Md. Reprinted from Virginia Medical Monthly, February, 1894. Price 25 cents.

Dr. Atkinson is evidently a believer in the theory that human life might and should be greatly lengthened. He says, "How grand if we could all live, like Mrs. Dalton, to the age of 102 years, and who smoked until she was 100 years old and then stopped it for fear the habit might shorten her life."

Dr. Atkinson gives a list of more than 250 persons who have lived to be over 100 years of age. This little pamphlet may be obtained by addressing him at 2101 Maryland Avenue, Baltimore, Md.

GOLD-FOIL IN THE SHAPE OF A CONICAL CAP INTRODUCED INTO A LACERATED CAVITY OF THE CEREBRUM FOR THE PURPOSE OF PERMANENTLY STOPPING THE OUTFLOW OF CEREBRAL TISSUE AND CLOSING A HOLE IN THE MEMBRANES. By W. L. Estes, A.M., M.D., of St. Luke's Hospital, South Bethlehem, Pa. Reprint from the Medical Review, March 10, 1894.

One may be always sure when one sees in print anything from the pen of

Dr. Estes that the matter is a valuable contribution to the science or art of medicine, and the report of this case is but another proof of the statement.

The case is the first on record in which the cerebrum has been *permanently* plugged by any surgeon. The patient was a negro who was kicked in the head by a horse, the blow causing a depressed fracture of the skull, and a laceration of the dura mater and cerebral tissue. After the removal of the fragments of the fractured bone, the brain tissue escaped through the opening. Remembering that Weir had recently used gold-foil to prevent adhesion between the dura and cranium and scalp, and that it had proved non-irritating, Dr. Estes fitted a sterilized cap made of heavy gold-foil down into the cavity of the cerebrum, and in six weeks from the date of the injury the patient left the hospital perfectly well, his faculties were all good, as was also locomotion, nor was there any indication of the loss of any function, or of any irritation from the cap.

CŒLIOTOMY FOR BILATERAL PYOSALPINX, FOLLOWED FOUR DAYS LATER BY APPENDICITIS ; OPERATION ; RECOVERY ; AND A CASE OF BILATERAL OVARIAN FIBRO-SARCOMA. By F. H. Wiggin, M.D. Reprint from New York Medical Journal, February 10th, and April 7, 1894.

In commenting on the first case, the author says that it teaches the folly of delaying reopening the abdominal cavity if a cœliotomy is followed by evidence of septic infection, because we may be afraid that the infection is general and that the operation is therefore almost hopeless, and it further teaches that we should not be deterred because the patient's general condition is bad. He thinks that in breaking up the adhesions in the cœliotomy, the appendix was injured, and that this may oftener be the cause of sepsis than we are aware. He states that it is not uncommon in the dead house or dissecting room to find the appendix adherent to the right ovary.

The second case was of special interest from its rarity. In 600 ovarian growths Schröder found but ten of fibro-sarcoma, and in 293, Olshausen found twelve.

TWO CASES OF RAPIDLY PROGRESSIVE GANGRENE IN WHICH PURE CULTURES OF THE BACILLUS PYOCYANEUS WERE FOUND. By George Ryerson Fowler, M.D., Brooklyn. Surgeon to St. Mary's Hospital and the Methodist Episcopal Hospital. Reprint from New York Medical Journal, February 10, 1894.

The conclusions which the author of this paper draws from these cases are : 1. That the destructive and profoundly toxic effects which characterize the presence of the bacillus pyocyaneus in the lower animals have not heretofore been observed to occur in man. 2. That where its presence has been discovered in connection with pathological conditions the pathogenetic significance of the organism has not been established, for the reason that heretofore there has not been placed upon record a single well-authenticated case in which the bacillus pyocyaneus was present in pure culture in the living tissues of the patient. Its presence in the blebs of Oettinger's case of typhus offers no more significance than is offered in those cases in which it is found in the blebs following burns. 3. The utmost that any of the observers who have studied this organism have yet claimed is that it delays the healing process, particularly the formation of new integumentary covering to the granulations, and produces a slow, chronic, but not intense toxæmia.

TWENTY-SEVENTH ANNUAL REPORT OF ST. PETER'S HOSPITAL, BROOKLYN, Under the Charge of the Sisters of the Poor of St. Francis, for the year 1893.

The reports of this hospital have always been among the best that are published in this city. The present one contains the statistics of the 2,156 cases treated during the year, of which 237 were of pulmonary tuberculosis. The total number of patients treated since 1866 is 31,848, of whom 3,809 died. 4,610 consumptive patients have been cared for during the same period, and of them 1,835 have died.

A MANUAL OF THERAPEUTICS. By A. A. Stevens, A.M., M.D., Instructor in Physical Diagnosis, University of Pennsylvania. Philadelphia : W. B. Saunders, 1894. Pp. 435. Price $2.25.

In this manual Dr. Stevens has succeeded in condensing a vast amount of material, and just such material as a student or busy practitioner desires to have ready at hand. It is fully up to date, and the searcher after the dose of piperazine or trional, or any one of a dozen of the newer remedies will here find what he wants. The chapter on "Incompatibility in Prescription" is short, but to the point. The Applied Therapeutics is as full as could be expected in a work of the kind.

THE HEALING OF RODENT CANCER BY ELECTRICITY. By J. Inglis Parsons, M.D., M.R.C.S., M.R.C.P., (London). Honorary Fellow, American Electro-Therapeutic Association; Fellow Royal Medical Chirurgical Society, etc. London : John Bale & Sons. 1893. Pp. 82. Price 5 shillings.

This monograph contains chapters on the pathology of rodent cancer, with the views of Cohnheim, Metchnikoff and others, and on the symptoms, diagnosis and treatment. About one-fifth of the book is taken up with electrophysics, and while the discussion of the subject is admirably conducted, it seems hardly necessary at the present time to go into such elementary matters in a work of this kind. Four cases are mentioned in which the electrical treatment was successfully employed, and the results are certainly most striking.

ANATOMY DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S., Lecturer on Anatomy at St. George's Hospital, London. New American from the thirteenth enlarged and improved English edition. Edited by T. Pickering Pick, F.R.C.S., Examiner in Anatomy, Royal College of Surgeons of England. In one imperial octavo volume of 1100 pages, with 635 large engravings. Price with illustrations in colors : Cloth, $7.00 ; leather, $8.00. Price with illustrations in black : Cloth, $6.00; leather, $7.00 Philadelphia : Lea Brothers & Co. 1893.

It seems a work of supererogation to do more in the way of noticing this book than to merely mention that a new edition has been issued, so thoroughly and completely has it established itself as *the* anatomy, par excellence. It is exceedingly interesting to compare this, the thirteenth edition, with the first which appeared in 1857 and note how the art of book-making has progressed from time to time. If we were asked to name a book which we regarded as the ideal of book-making we should unhesitatingly say, Gray's Anatomy, thirteenth edition. The text has been thoroughly revised, and the illustrations, of which there are 636, are unsurpassed, and most admirable.

A DICTIONARY OF MEDICAL SCIENCE. By Robley Dunglison, M.D., LL.D. Twenty-first edition, thoroughly revised and greatly enlarged, with the pronunciation, accentuation, and derivation of the terms by Richard J. Dunglison, A.M., M.D. Philadelphia: Lea Brothers & Co. 1893. Pp. 1181. Price $7.

The subjects and terms contained in this edition over and above those in the last, amount by actual count to forty-four thousand, a statement which gives but a slight idea of the amount of labor bestowed upon it by its reviser. We notice that a system of pronunciation has for the first time been introduced into the work; a valuable addition we think. So fully have derivations and definitions been considered, and so great is the amount of practical matter, such as symptoms, treatment, and prognosis of many of the diseases described, that the volume is entitled tö be called an encyclopædia rather than a dictionary. The reviser has elaborated the fundamental purpose of the distinguished author, "to make the work not a mere lexicon of terms, but to afford under each a condensed view of its various medical relations, and thus to render the work an epitome of the existing condition of medical science."

HOW TO USE THE FORCEPS, WITH AN INTRODUCTORY ACCOUNT OF THE FEMALE PELVIS AND OF THE MECHANISM OF DELIVERY. By Henry G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children, in Sterling Medical College, Columbus, O. Revised and enlarged by Charles H. Bushong, M.D., Assistant Gynæcologist and Pathologist to Demilt Dispensary, New York. Illustrated. New York: E. B. Treat. 1894. Pp. 203. Price $1.75.

The manual of the late Prof. Landis is well-known, and though some of his views differ very materially from those that are generally accepted. Still the arguments upon which he based them are very convincing to many minds, as being based upon certain recognized anatomical facts. Dr. Bushong is one of these, and his practice at the bedside has confirmed the statements of Prof. Landis. Believing that the book contains too much of value to permit it to be a thing of the past, he has edited this new and enlarged edition. Its value is enhanced by chapters containing critical remarks and illustrative cases.

GUNSHOT WOUNDS OF THE LONG BONES. By Major George R. Fowler, Surgeon National Guard, State of New York. Reprint from Transactions of Third Annual Meeting of Association of Military Surgeons of the United States held in Chicago, August 1893.

This is a very complete and concise statement of what is latest in gunshot wound of the long bones, with a description of the author's telephone probe, and report of a case in which its value was strikingly demonstrated.

The author scores the general and State government for their neglect to furnish to surgeons proper instruments for the saving of limbs, and says that they care "more for an accurate alignment on dress parade, and a spotless gun-barrel and equipments, than for the maimed and unnecessarily mutilated cripples, or the lives brought into jeopardy for the want of a few paltry dollars expended in a proper professional equipment for its medical department."

A Primer of Psychology and Mental Disease. By G. B. Burr, M. D., Medical Superintendent of the Eastern Michigan Asylum etc.; Detroit. George T. Davis, 1894. Pp. 104.

This is a very concise outline of the subject treated and might well serve as a basis for a course of lectures. There should be no difficulty in finding any of its contents, as one fifth of the book is index.

Clinical Diagnosis. By Albert Abrams, M. D., (Heidelberg.) Professor of Pathology, Cooper Medical College, San Francisco, Cal., etc. Third edition. Revised and enlarged. Illustrated. New York: E. B. Treat. 1894. Pp. 273. Price $2.75.

This is a revised edition, somewhat enlarged by the addition of many synoptic tables, a chapter on insanity, and a summary of recent methods of diagnosis.

Two Cases of Congenital Hypertrophy of the tongue. A Case of Tuberculosis of the Thyroid Gland. Short Notes on Unusual Cases. By Walter F. Chappell, M.D., M.R.C.S., Eng. Surgeon Manhattan Eye and Ear Hospital, New York. Reprint from Manhattan Eye and Ear Hospital Reports, Jany., 1894, and Annals of Ophthalmology and Otology.

The "unusual cases" include one of fibro-myxoma of the nose, and one of membranous rhinitis, and a third in which anosmia and parosmia were present at the same time.

The International Medical Annual and Practitioner's Index; A Work of Reference for Medical Practitioners. 1894. Twelfth year. New York. E. B. Treat. Pp. 704. Price $2.75.

Part I is a Dictionary of new remedies, and contains a complete report of all new therapeutic agents introduced during the year, with clinical indications for their use, and a general review of therapeutics; as this is by Professor H. A. Hare, it goes without saying that it is very full and very satisfactory.

Part II is a Dictionary of New Treatment, and contains many valuable articles; among which we specially note, Appendicitis, with full page illustration, by Professor Barling of Birmingham, and by Wm. T. Bull of New York; Skin diseases by T. Colcott Fox; Facial expressions as a means of diagnosis and prognosis in insanity, by James Shaw; Antiseptics in the treatment of phthisis; symphysiotomy; and eczema, by Professor Unna.

Part III is entitled Sanitation, and contains a record of the year's work in Sanitary Science; Progress of Pharmacy and New Inventions and Appliances.

The volume is well illustrated, and taken as a whole, is almost indispensable to the physican who desires to keep himself informed on the most recent contributions to medical science.

Dr. JAMES.

From an Original Bust by Scheemaker.

G. Kneller pinx. Audinet sculp.

Wm Stukeley

M.D. FRS. FSA.—Born 1687; died 1765.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

OBSERVATIONS ON NEUROTIC DISTURBANCES OF GASTRIC SECRETIONS.

BY J. FUHS, M.D.

Read before the Medical Society of the County of Kings, December, 1893.

The investigations of the functional activities of the stomach in health and disease have brought to light many valuable facts, and assisted us to understand heretofore obscure diseases of this organ.

Though these researches are of great value to our knowledge of the structural diseases of the stomach, they are of still greater significance in those cases, where pathology has failed to reveal any anatomical changes.

Clinical observations point very strongly to the fact, that in many cases the functional derangements, occurring even in structural diseases of the stomach, cannot be explained by the lesions found, but must be regarded as the result of disturbances of innervation.

Thus in inflammatory, atrophic and malignant diseases, the disturbances of secretion are directly due to destruction of the glandular structure An instance of the intervention of the nervous system in cases of structural disease is presented in the increased peristalsis in glandular-atrophic conditions, by means of which the stomach is evacuated in less than normal time.

The great influence of the nervous system over the functions of the stomach, even in health, is a matter of daily observation. Emotions, such as fear, worry, grief, etc., have a decided influence in causing derangements of the gastric functions.

The diminished acidity of the gastric juice found during menstruation by Kretschy, Fleischer and Boas, might be regarded as an instance of reflex disturbance. Though this nerve influence cannot be questioned from a clinical standpoint, experimental researches having for their aim the determination of the influence of the pneumogastric and sympathetic nerve branches supplying the stomach have not resulted in advancing our knowledge materially.

While it is conceded, that gastric secretion takes place independent of the pneumogastric and sympathetic systems, still it is influenced by impulses coming through these channels.

Jürgens found that deep division of the vagus causes a diminution in the amount of gastric secretion and of pepsin.

It is furthermore accepted by many observers, that the pneumogastric contains sensory, motor and vaso-motor fibres, which terminate in the stomach, while little is known of the function of the sympathetic.

In spite of our imperfect knowledge of the relation of the nervous system to the functions of the stomach, the fact remains and is proven by clinical observations, that normal and abnormal impulses reach this organ through the medium of this system. The nerve disturbances of secretion are of special interest to us in the consideration of our subject, and the neurotic motor, sensory and resorptive functional disturbances associated or produced by altered secretions, must necessarily receive attention, for we rarely find pure and uncomplicated neuroses of secretion.

The simplified methods of obtaining and examining the contents of the stomach have been of the greatest importance, as through their agency the field of observation has been extended from the laboratory to the bed-side. To-day they are recognized as one of the most valuable diagnostic aids for the clinician.

As an instance of the important results thus obtained, I will mention the early diagnosis of cancer of the stomach by means of the examination of the gastric secretions.

As aids for the recognition of the neurotic origin of certain diseases of the stomach, the examination of the gastric secretions has been of no less value, and ranks equal to and often higher than those obtained by etiology and symptomatology, while their true significance appears when viewed in connection with the two factors last mentioned. It would therefore be just as misleading to classify all diseases of the stomach according to the abnormalities of the secretions of this organ, as to arrange them according to their subjective symptoms.

Thus we find in the work of Hayem and Winter the diseases of the stomach divided into hyperpepsias and hypopepsias and often hear of flatulent, fermentative and atonic dyspepsias, which derive their names from the most prominent symptoms.

The defect of a classification based on peculiarities of the various disturbances of gastric secretion is easily demonstrated by clinical observation.

So we find the condition referred to as hyperpepsia by Hayem and Winter at one stage, and the opposite hypopepsia at another stage of the same disease. while normal and abnormal secretions were observed to succeed each other, as shown in some of the following histories.

We look to etiology as the true principle of classification, only to find few well-determined data, especially as regards the origin of the gastric secretory neuroses. Still, certain types of this disease have been incorporated with one or the other of the general neuroses, such as Hysteria, Neurasthenia, Melancholia, etc., while others are grouped under the head of gastroxynsis, and Reichmann's disease as *special* secretory neuroses.

Many forms of this disease have only been described as hyperchlorhidy and subchlorhidy, names referring to increased or diminished percentage of HCl. contained in the stomach contents at the height of digestion.

There can be no doubt, that many of the cases last mentioned, will, in future, be classified and placed in definite groups, having a common etiology and presenting characteristic symptoms. Thus we distinguish between gastralgias with hypersecretion and hyperchlorhidy, occurring in connection with locomotor ataxia, the gastroxynsis and those found associated with hysteria and neurasthenia.

The observations of Beard, Leube, Oser, Von der Velden and others regarding the relations of the gastric to the general neuroses are of great value. Under the name of nervous dyspepsia (neurasthenia gastrica) Leube described a gastric sensory and motor neurosis without any alteration of the secretion.

Further experience proved the existence of secretory disturbances in many of the cases of nervous dyspepsia. Still the term, nervous dyspepsia, is retained, and according to Leube, applies to the form of gastric neuroses in which, with or without alterations of secretion, the symptoms, such as pain, eructations, feeling of distention, are of moderate degree, and none of them especially prominent.

Other authors, notably the French, include all forms of gastric neuroses under this heading, and it is therefore necessary to call the disease above mentioned the nervous dyspepsia of Leube. Soupault, a pupil of Debove and a recent author on nervous dyspepsia, classifies the forms of this disease into hyperthenic, asthenic and irregular cases, and attempts to find a distinctive symptomatology for each class, and describes a characteristic alteration of secretion for the two first named forms.

The hyperthenic variety being characterized by an increased percentage of HCl., the asthenic by a diminution of this acid. This forms, in fact, the only distinguishing feature between the two varieties of this disease, as in many cases one cannot differentiate them sufficiently by their symptomatology. Ewald, Boas and Rosenheim classify the secretory neuroses into super- and subacidities, and other forms recognized by quantitative alterations of secretion, such as the gastroxynsis and the gastrosuccorrhea of Reichmann.

The increase or diminution of HCl. presents the chief alteration of the stomach contents in gastric neuroses.

The ferments, pepsin and rennet, vary only slightly, a fact especially emphasized by Boas, which I have been able to verify by numerous tests and which has been utilized to differentiate the secretory neuroses from some of the organic diseases, such as malignant and inflammatory affections in which the ferments are found only in small quantities or are entirely absent.

The percentage of lactic acid enables us to form conclusion only as to the motor powers of the stomach, by indicating retention or rapid expulsion of food from this organ.

The cases which will be later described demonstrate that there may be variable quantities of lactic acid in both hyper- and subchlorhidy, and that the percentage of lactic acid depends either on muscular atony, spasm of the pylorus, or obstruction of the channel from other causes.

Comparing the abnormal secretions with the physiological standard, we observe, that there are alterations of the percentage of HCl. and of its quantity and deviations as to the time and duration of the secretion of this acid. I will consider this evening only one of these alterations: Hyperchlorhidy is the state of the gastric contents in which the percentage of HCl. exceeds 2 promille, requiring 60 or more parts of a decinormal, or $^1/_{10}$ volumetric solution of caustic potash or soda for the neutralization of 100 parts of filtered stomach contents.

The patients presenting this condition, that came under my observation, belonged to neurotic families or had been subjected to severe mental strain.

They may not suffer in the least for a time and appear to be in perfect health. An instance of this, which I had an opportunity of observing at Rosenheim's clinic, occurred in the case of a medical student, where the stomach contents were removed to obtain normal material and hyperchlorhidy was found.

The mental strain resulting from his preparation for the final examination for his degree was the only etiological factor here discovered.

It is very probable that in many cases hyperchlorhidy exists for a considerable period of time previous to the appearance of marked symptoms.

Numerous opportunities offered themselves to convince me, that, in the cases in which the existence of ulcers could not be diagnosed and presenting acute attacks such as gastralgias and long intervals of apparently perfect health, a certain degree of hyperchlorhidy persists during the latter period.

The following condensed history will serve to illustrate this fact :

E. M., twenty-five years of age, merchant, single, a member of a neurotic family, called October 14, 1892, and stated that he enjoyed good health up to one year ago, when after considerable worrying, he was suddenly taken with a severe attack of gastralgia, which would be relieved by taking nourishment and would recur two or three times a day for a period of six weeks.

They then ceased, but reappeared two weeks ago. He was then much grieved by the loss of one of his nearest relatives. The sharp pains extending from the epigastrium to the middle of sternum generally appear at nine in the morning and are decidedly ameliorated by taking food. They reappear at about 4 P.M., to last until supper, if he does not partake of some nourishment previous to that meal. He complains of acid eructations. The bowels are regular. Patient presents no evidence of organic nerve disease. Examination of chest negative.

The epigastrium is not sensitive to pressure; deep pressure tends to relieve the distress.

Cathartics, such as the compound tincture of aloes, having failed, as had also a milk diet, he was put on alkalies and sprudel salt, with much benefit.

As there was no reason to suspect ulcer, an exploration of the stomach was resorted to on October 19, 1892, and subsequently at intervals of three days to a week to January 6, 1893, with the following results :

Large curvature a finger's width below the umbilicus. There does not appear to exist any downward displacement of the small curvature. No increased peristalsis.

The quantity removed one hour subsequent to the administration of Ewald's test breakfast, consisting of a cup and a half of tea and a water roll, exceeds the normal amount (of about 50 ccm.) varying from 100 to 150 ccm. The contents are quite fluid, contain very little mucus, are frequently of a greenish tint from admixture of bile, and separate rapidly into a turbid watery portion and finely divided solid part at the bottom of the glass.

The total acidity varied from 68 to 84, the free HCl. from 68 to 52, the combined HCl. was generally 16.

Lactic acid, a small quantity by titration, but giving at times a decided green discoloration, with Uffelmann's chloride of iron test. Diminished amylolysis, biuret reaction for products of peptonization very decided.

This peculiar condition of the stomach contents, removed one hour after Ewald's test meal, persisted while the patient appeared to be in good health.

It can readily be perceived that this is of therapeutic importance, showing the necessity of continuing treatment in this class of cases during the intervals between the attacks of gastralgia.

In every instance the stomach was found empty two and a half hours after the administration of the test meal. Only once a small quantity of fluid, (about 20 ccm.) containing some HCl. was found on examining before breakfast (perhaps caused by the introduction of the tube).

It was further observed that though the evacuation of the contents of the stomach was retarded during the first hour, it seemed to take place with increased rapidity during the first part of the second, being accompanied by much gurgling.

In this case the hyperchlorhidy was brought to our notice solely through the occurrence of gastralgic attacks, failing to give rise to other symptoms for many months. Even the gastralgia cannot be referred directly to the hyperchloridy.

Strongly contrasting with the lack of subjective signs and with the persistent character of the vice of secretion noticed in this case, we find an abundance of annoying symptoms in many others, appearing and disappearing with occurrence and cessation of the alteration of secretion as illustrated by the following history:

November 29, 1893, W. H., thirty-four years of age, policeman. Father and one brother died of consumption. Family history good as regards nerve and digestive diseases. He uses alcohol and tobacco moderately. Well up to eight years ago. At that time, after a great deal of worry, he began to suffer from heart-burn, vomiting of very acid food, acid eructations, commencing half hour after meals, water-brash and a full feeling before and after meals. Is irritable and despondent on account of his bad health. He suffers more or less with every meal according to the character of the food taken, but there is no acute exacerbation or attack of gastralgia as in the case previously related. No hæmatemeses. Patient is muscular, ruddy. Physical examination negative, with the exception of a point of tenderness midway between the xyphoid cartilage and umbilicus.

Inflation shows normal gastric dimensions. Examination of gastric contents, removed one hour subsequent to the administration of an Ewald test breakfast, gives the following results : Quantity about 100 cc. solids finely divided, rapid sedimentation, very little viscid mucus. T. A. 68, free HCl. 38, lactic 4.

In a similar case, that of E. C., but of twenty years' standing, inflation did not prove the existence of dilatation. Here the total acidity was 80. Free HCl. 64. Evacuation completed in two and a half hours.

The third class is formed by cases in which hyperchloridy occurs during certain acute attacks, characterized by severe headache, nausea and vomiting. Rossbach was the first to describe this form. I had an opportunity to examine the secretion during an attack and also during the interval in the following case.

A. T. B., twenty-seven years of age. Good family history. Never been strong, but was well up to two years ago. At that time, without any cause known to him, he began to be troubled with his stomach. The first he noticed was an attack of sick headache with vomiting of very acid stomach contents.

While at first the attacks were separated by intervals of weeks of comparative good health, they would lately appear every few days. Now his stomach troubles him more or less all the time, he has acid eructations, a full feeling after meals, but no pain.

Examination of stomach contents *during the interval*, one hour after partaking of an Ewald test meal : Quantity 50; total acidity 46. No lactic acid. Very little viscid mucus. No dilatation.

Examining during the attack, one hour and fifteen minutes after having taken a similar test meal : Quantity 150. Total acidity 90. Free HCl. 44, a small quantity of lactic acid by Uffelmann's reagent. Feels much better after irrigation.

Here we find dimensions of the stomach normal, secretions during the interval and hyperchlorhidy during the attacks.

While in some cases the motor function of the stomach is not notably disturbed, it is interfered with in others to the degree that at the end of the hour the organ contains more than the usual quantity of the test meal, the evacuation being still completed in the normal time.

Higher degrees of atony with decided stagnation of food I never had an opportunity to observe in connection with these cases. In a number of my cases hyperchlorhidy was associated with the peristaltic restlessness of Kussmaul, with nervous diarrhœa, with gastroptosis, with movable kidney, in two cases with biliary calculi, with extreme hyperæsthesia of the mucous membrane to gases and liquids and many other neurasthenic and hysterical symptoms.

It would be impossible to describe the innumerable clinical pictures resulting from these combinations.

The relation of the various degrees of dilatation to the hyperchlorhidy is not clear, but I am inclined to regard the atony as the primary disturbance.

The existence of a spasmodic contraction of the pylorus has been accepted by Kussmaul and others to explain the dilatation.

Further clinical observations are urgently required; every additional case recorded is of value. At present the treatment rests on the indications presented by the peculiarities of each individual case.

Alkalies, bromides, belladonna, strychnia, remedies of the most divergent action, hydropathy, electro- and climato-therapeutics each find a place, though a disputed one, in the treatment of this neurosis.

May these remarks serve to stimulate others to fruitful researches for the better knowledge of nervous diseases of the stomach.

DISCUSSION.

Dr. Max Einhorn, of 107 East 65th Street, New York: Mr. President and Gentlemen, I feel very much gratified that you have invited me to take part in this discussion. The paper of Dr. Fuhs is an excellent one, but it comprises such a large field it would hardly be possible for me to enter into a discussion of all the points, so I shall prefer to say a few words about hyperacidity, or hyperchlorhidy, as Dr. Fuhs called it, which is a disease which is so common.

It is very hard to say when the abnormal state begins in the gastric secretion—what is normal and what is not normal. I rather believe that there are many people who feel very well with the contents of the stomach containing too much of the gastric juice, a state of hyperacidity. Again there are other people who feel well with a smaller degree of acid in the stomach than we think there should normally be, but I should think that these abnormal conditions begin with the subjective complaints of the patients, and especially if we see that as soon as we change these abnormal conditions in the way we have heard spoken of to-night —as soon as we see the patient is feeling the benefit of it—then we have the proof that their condition was not the normal one and that we have bettered it by our treatment.

In making these remarks I speak from experience. I have made tests of various person's stomachs for the sake of ascertaining the normal conditions. I did this in the case of my servant girl. She did not complain of any trouble, but I told her I wanted to ascertain the condition of her stomach just to please myself. She consented, and I found in that patient an absence of free hydrochloric acid. I repeated the test several times and I found always the same condition, the contents were acid, but the free hydrochloric acid was absent. She gets along very well without any medicine and she is perfectly well. On the other hand I know plenty of people who have been patients of mine who have hyperchloridity and get along very well without any medicine. They took some medicine for a time, perhaps, but the condition did not change—sometimes we cannot change the condition—and they get along very well if they are otherwise in good health. If we find only a small degree of hyperacidity it may not trouble the patient very much, but if we find a very great difference, for instance if we find a degree of acidity twice as great as normal, then we indeed say that it is a pathological condition we have to deal with. It is hard to say how to classify all those different conditions. As Dr. Fuhs mentioned, most gentlemen in France and Germany classify them according to the condition of the gastric juice, according to the amount of hydrochloric acid, and he said there are some neurotic troubles which go along with too much secretion, and again, conditions which go along with not enough acidity in the contents of the stomach, which he called hypochloridity or subacidity, but they are names and that is all. Leube at first said that neurotic dyspepsia was where there were subjective complaints of the patient and still the gastric juice was found normal. At that time we did not know the exact methods, but he applied two tests; one test was that the stomach has to be empty seven hours after a dinner or a large meal; in cases where the stomach is not empty seven hours after a full meal then there must be some trouble in the motor function. Again he tested the gastric juice by putting ice water in the stomach and waiting half an hour and seeing whether it digested a little piece of white of boiled egg. As soon as he found that the stomach digested the egg-albumin in the juice, and again was empty seven hours after a full meal, he said there is no real trouble or organic trouble at all, but it is a neurotic trouble, it is nervous dyspepsia. But later on when we had better methods of examining the contents of the stomach, and began to examine also the amount of hydrochloric acid, which Leube did not do at that time, we found that in many instances the egg-albumin was digested too rapidly, and that was again something which was not normal, still, according to Leube, these cases belonged to nervous dyspepsia, although there is some objectionable point which we find is not normal, and this is why the term of nervous dyspepsia has been given up partly. Ewald proposed the name of neurasthenia gastrica for those cases where we find not much that is abnormal, in the gastric secretion, nor abnormalities in the motor function of the stomach, but that is about the same as Leube would call nervous dyspepsia. Again we often have to deal with patients where we do not find many objectionable points, where the gastric secretion is quite normal, and the acidity is all right, but still the pains and loss of appetite are there; so it is very hard to say in this instance whether this class of patients belongs at all to the stomach alone or whether it is a neurotic trouble or neurasthenia itself. It is very hard to differentiate between them.

Now in reference to the hyperacidity and to those cases where we find the stomach too acid, I will mention only one case as showing when treatment is necessary and how much good it can do. There was a physician in a city very near New York, suffering very much with gastralgia and his pains were especially on the right side. I do not know how long he had been troubled, probably a year, and he had been to see many physicians, and it was thought that he had gall stones, because the pain was localized more on the right side and the attacks came suddenly. He underwent an operation in New York but there were no gall stones found, and the abdomen was closed and his suffering went on. In the beginning of last summer he came to me and I found that the stomach was larger than it ought to be normally, but the main point was that in the morning the stomach was empty, which is a point of equal importance to Leube's point, that the stomach should be empty seven hours after a meal. If we find the stomach empty in the morning before the patient has eaten anything it is a more constant sign that there is no obstruction at the pylorus. Now this patient with the empty stomach in the morning, as has been seen, had no real obstruction. Examination of his stomach one hour after his breakfast showed a degree of acidity, 120, or about twice as much as the normal, which is from 40 to 60. I told him that it would probably be best to arrange his diet according to his condition. Here we have a real case of hyperacidity, of too much gastric juice, and in these cases it is best to give them much albuminous food and then to take alkalies. He took bicarbonate of soda two hours after meals, because at that time the degree of acidity is highest, and at that time probably the abnormal condition would begin and it is the best time to give the alkali. He took a small teaspoonful three times a day of soda-bicarbonate, and took exercise. I did not see him any more and I wondered what had become of him. Now he has no pain in the side. He went to Germany and there he saw Ewald, who sent him to Carlsbad; he left there and went to Switzerland and there he took the bicarbonate treatment. He now feels splendidly and has gained many pounds. That was the report I had from another gentleman about this physician.

Now you see in such an instance why the gastralgia afterwards disappeared. I forgot to say that before I examined him he had lost about forty pounds; but here you see there are cases which go along with severe symptoms where there is no real organic trouble, simply acidity, a neurotic disturbance of the secretion, and here we must apply the alkalies for a long time and arrange the diet accordingly and in that way we find the best results.

Dr. Fuhs mentioned in the way of therapeutics many points of importance, and I might say a few words about electricity, as I have had quite an experience with this agent. I think that for gastralgias, especially those which go along with hyperacidity of the stomach, there is no better means of treatment than the internal or direct gastro-galvanization. I have found many cases where you get good results from the gastric faradization too, but for those cases which go along with the severe gastralgias I think the galvanic current applied internally is the best means we have. In these cases under my treatment there will be some exceptions to that, but those cases I have had with gastralgia and hyperacidity have all been benefited by the galvanic current applied within the stomach, and I must say that the length of time needed is not so long considering the condition. You all know that we have sometimes to deal with gastralgias of such a severe nature that everything fails, and where the patients have to suffer for years before they get rid of them, and the galvanic current applied internally every other day for about two weeks, and then for some time at longer intervals, say twice a week or once a week for a month or two months—I say that after a week or two weeks you will see, as I have seen, that these people are greatly benefited. The pains begin to be less severe than they used to be, they do not disappear all at once but begin to be less severe, and then the intervals are longer when there are no pains, and then after a while you will see that your patient does not have any pains at all. As I say, I have had very many such instances and I have not had one where the treatment did not give benefit. In this way you will pardon my enthusiasm for this direct electrolization of the stomach, and I would like you to try it.

Dr. E. H. Bartley: I have had some experience in the examination of stomachs in the way Dr. Fuhs has described, and I have great respect for this paper because it adds at least two observations, and exact observations, upon a subject that it must be admitted is difficult. There is probably no set of diseases where we are so much in the dark in our ordinary treatment as in the diseases of the stomach, and I presume that many of the gentlemen here have come to the conclusion, as I have more than once, that there is no rule for the stomach but the "try rule." As a result the patient goes about for years suffering the tortures of a dyspeptic, and gets no better.

Even after making these examinations I have not yet succeeded in getting my cases classified so that, in all cases, I know just what to do after I have made my examination. Some of the cases I have been able to relieve quite promptly, and it is those few cases that make it worth our while to follow up these observations. Even those who have written on the subject of the exact examination of the gastric contents have been somewhat contradictory in their statements, and Ewald has said that he is not as positive as he formerly was as to the deductions to be drawn from such examinations. The paper, however, brings to our notice certain well-marked cases of neurotic trouble accompanied with this hyperchloridity or hyperacidity. There are cases of the condition of affairs that he describes that we can not attribute to any nervous disorder. It is admitted, I believe, that we have cases of hyperchloridity without any apparent cause. I have one under treatment now in which I can discover no assignable cause for that condition of affairs. The degree of acidity, however, is not as great as the one mentioned by Dr. Einhorn, but it is quite marked, and with a great deal of gastralgia coming two or three hours after the meal, which is relieved by eating a small quantity of some dry food. Water rather increases it, but he finds the greatest relief from a little dry cracker which I suppose acts by partially neutralizing and by soaking up the excess of acid.

I have another case that is a marked case of the opposite condition without any distress of any kind, without even unpleasant eructations or anything of that character. He is in the condition of the servant girl mentioned by Dr. Einhorn, with no free hydrochloric acid. What he consults me for is loss of flesh. I thought that absence of hydrochloric acid and loss of flesh would indicate the existence of malignant disease, but I simply administered fifteen minims of dilute hydrochloric acid and he gained six pounds during the first two weeks of treatment.

This case shows that occasionally we can do a great deal by these examinations, but we must not expect that in all cases we can relieve as promptly as that. The only remarkable thing in that case was that there were no eructations of gas, which we generally expect in the absence of hydrochloric acid. That is contrary to the rule.

I might relate as a coincident occurrence of some interest, a case of dilatation of the stomach with excessive fermentation with periodical attacks of neuralgia and vomiting lasting three or four days for the past eight years, In this case, after washing the stomach thoroughly two or three times, I undertook to give the stomach a rest, and ordered nutrient enemata to be given. She remarked that I could not give her milk, as it did not agree with her, but I insisted that it would agree with her if given in that way though it might not by the stomach. I ordered the enema given, and half an hour afterwards she vomited a large part of the milk curdled.

Dr. Fuhs : I wish to thank the gentlemen for their remarks on my paper, and I also want to mention that I omitted the detailed consideration of the treatment of this affection, as this would lead to an endless discussion.

Still there are some points that I wish to mention, namely, that in cases of subchloridy of nervous origin, hydrochloric acid is generally well borne. This fact can be utilized in the diagnosis of subchloridy. As long as the motor function remains intact the quantity of lactic acid found an hour subsequent to the administration of a test meal was very small.

Animal food, especially milk, is a product in cases of hyperchloridy. Alkalies in full doses are required in this condition. The fear of producing excessive alkalinity of the blood or cystitis, is unfounded.

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THE INITIAL SYMPTOMS OF HIP-JOINT DISEASE; WITH REPORT OF CASES.

BY WALTER C. WOOD, M.D.,

Asst. Surgeon St. Mary's Hospital, Brooklyn.

In the greater proportion of these cases presented at our clinics, the diagnosis is an easy matter. It is much to be deplored that so many children reach the stage of deformity before the employment of more rational measures than poultices, tincture of iodine, the salicylates, or at best temporarily and inefficiently applied traction. The picture of these unfortunates is classical and needs no description.

There is another set of cases to which I desire to call your attention. I refer to those children, apparently healthy, who have nevertheless a slight but rather persistent limp referred to the hip-joint. They have no deformity and movement is free. The mother may tell you that the child is restless at night and occasionally complains of pain. There seems to be however no marked local tenderness. There is no history of a traumatism. A careful examination, after the manner to be described, will show other departures from the normal.

With fair hygiene, and the scientific application of the three fundamental principles of conservative joint treatment—the great majority of these cases never present the typical lesions of tubercular arthritis—*extension*, *fixation*, and *protection*, continuously applied, give an excellent and often a perfect result.

Most of these, I believe are early cases of hip-joint disease as the term is generally understood. It is certainly true, however, that some of them are not. After we have obtained an excellent result, we are apt to be a *little* uncertain about our diagnosis. Therefore in estimating the value of the various symptoms ascribed to the initial stage of this disease, it is wise to exclude from our consideration, all cases that terminate favorably. Thus we eliminate, I think, the possibility of error in diagnosis.

The sixteen cases that I report to-night meet these two requirements : 1st, a late examination shows so advanced a condition that the diagnosis of tubercular arthritis is firmly established. 2d, the early symptoms are not continuous with any known traumatism and thus obscured. Thus, I think, are excluded all neuropathic joints, rheumatism, congenital dislocation, sprain, strain, contusion, and simple synovitis. It is with permission of Dr. V. P. Gibney, surgeon-in-chief to the Ruptured and Crippled Hospital that I report these cases from the out-door department. They are selected from over 600 cases treated in the three years previous to '93. The number is so small because the following sets of cases are not available : 1st, the large number presenting well-defined symptoms on first examination ; 2d, all cases that improved soon after the commencement of appropriate treatment ; 3d, those whose attendance was not prolonged sufficiently to determine results ; 4th, cases where histories are incomplete.

Instead of reading the appended table I will first give briefly a few facts concerning a late condition of each case, thereby establishing I hope to your entire satisfaction, the diagnosis of every case, then consider by groups the apparently trivial symptoms shown at the first examination, hoping in this way to impress the fact that a *probable* (not a *positive* diagnosis) can be made at a stage earlier than is usually considered possible.

Case 1.—Two and a half years after the first examination there is well-marked deformity, the thigh being flexed and adducted. It is held motionless at 145° and there is a history of acute symptoms.

Case 2.—Three years after first examination, there is one inch actual bony shortening and a greater practical shortening because the limb can move only from 160°–170° and is adducted. There is also an atrophy of the thigh of two inches.

Case 3.—After eighteen months the thigh is fixed at 150°. The degree of deformity giving a marked limp. Two and a half-inch atrophy of thigh.

Case 4.—Three years after, the thigh moves between 140° and 150°. It is held adducted 16°. There is also a two-inch atrophy of thigh.

Case 5.—In five months' time, there was a well-marked abscess and a full set of acute symptoms.

Case 6.—In fourteen months the leg was fixed at 145° and acute symptoms were present.

Case 7.—Two years afterward the leg was fixed at 140° with previous acute history.

Case 8.—After two years there was only 5° motion with great pain, tenderness and marked deformity.

Case 9.—After two years there was abscess, acute pain and the hip was fixed at 145°.

Case 10.—After two and a half years, large abscess marked deformity and atrophy, for six months the child had been in hospital with very acute symptoms.

Case 11.—In five months, acute symptoms with an abscess.

Case 12.—In six months all motion was lost and leg firmly held in extreme adduction.

Case 13.—In fourteen months the limb was fixed at 160° and rotated outward, an abscess also was present.

Case 14.—In seven months required operation for correction of marked deformity.

Case 15.—In eight months time great tenderness was present, the leg was fixed at 140°.

Case 16.—In one year after first examination, child died with abscesses and dropsical symptoms.

I have no hesitation in reporting these deplorable results. They are less than three per cent. of the number treated. In the full history of each there is a good reason for the result. It is usually great neglect on the part of the parents in following directions, the children being without treatment for months. Often nothing was done after the first examinations until a severe condition was reached and in one at least there was no visit between the first and last entry.

When first seen these 16 cases were between four and ten years of age ; the average age being seven years.

In making a probable diagnosis and prognosis in one of these early cases, I think the history of a preceding contagious disease should be considered. We note only the following : smallpox, measles, scarlet fever, diphtheria and whooping cough. Of these 16 cases, 12 had had one or more of these diseases within the year preceding the lameness, two more had had such a disease but the date is uncertain. In the remaining two there is no record. In order to estimate the significance of these facts, we should know how prevalent are these diseases among children in general. That I cannot state. However, an impression gained from the observation of many early cases, strengthens me in this opinion ; that when an infectious disease has preceded the limp, the child is more apt to develop a chronic and often a serious inflammatory joint lesion than when there is no such history.

All these cases were lame, none had a severe limp. In the first eight cases the duration of the limp when examined was 12 days, 14 days, 7 days (this case had limped for a few days two months before but not in the interval) 12 days, 8 days, 6 weeks, 3 weeks, and 3 weeks. These are the more acute type of the early cases. In all, the limp was continuous during the time mentioned; 5 of them complained more or less of pain, were restless or cried at night, and on forced manipulation showed some tenderness. The remaining three cases had neither pain, night cries, nor tenderness. In the second 8 cases the invasion was much less acute and although the duration of the limp was longer the conditions present were no more advanced than in the first 8. These children had been lame respectively, 1 year, 3 months, 3 months, 1 year, 3 months, 5 months, 7 months, and 1 year. The limp differed from the limp in the first set in two respects, it was less marked and not constant. The parents said that at times it had been scarcely noticeable or even entirely absent.

I think it is more marked early in the morning from stiffness, and in the evening, or after an unusual amount of exercise, from weariness. Five of these children had also complained of pain, but a special note is made that it was slight or only occasional, three had not so complained, only one had had night cries and in two only was tenderness elicited by manipulation. These facts lead us to say a word about

Pain as a symptom of early hip disease. Its location was usually in the knee or the inner side of the thigh. Of the total 16 cases however, 6 had not had pain, 2 had had very slight pain, and 9 had no tenderness when examined. Because in the course of the disease it is so prominent, a physician is apt to agree with the mother's common remark, "my child can't have hip disease because he hasn't had pains." We have learned to diagnose carcinoma of the breast and uterus without waiting for pain, and if hip-disease is to be cured with the least possible deformity, we must sometimes do the same in this affection. Many years ago, Sir James Paget in his "Clinical Lectures and Essays" described these cases without pain under the title "Quiet Necrosis." Any one of these cases may at any time take on a most acute character, or even without so doing may cause such deformity as to seriously cripple the individual. In the table, it seems as if these "quiet cases" ended even more disastrously than the more acute ones.

Muscular Atrophy of the thigh was present in all these cases where the duration of the limp was more than three weeks, and was present also in the 7 days' case who had limped previously. In the slowly developing cases it is more marked and thus a valuable aid in diagnosis. The calf-atrophy is usually about one-half that of the mid-thigh and thus less easy to recognize early. It is not included in these tables. Atrophy at the knee is a much later symptom and does not now concern us.

Limitation of Motion is the one constant symptom in all these cases and is the crucial test on which a probable diagnosis of early hip disease must rest. Its appearance and the limp seem to be coincident. Lameness, without limitation of motion, does not point to tubercular disease. This condition, however, must not be confounded with stiffness. Moving the leg back and forth in the usual way while the child lies on the table, will not determine limitation of motion in such slightly developed cases as we are now considering. The departure from the normal is found only at the extreme limits of the normal arc, and throughout the greater part of its range the suspected thigh will move as freely as the sound one.

Our inquiry must include five motions, viz : limitation in the directions of flexion, extension, abduction, adduction, and rotation. The pelvis must be fixed—Holding the sound limb firmly extended on the table, the suspected limb is slowly flexed. In many children, it will go even to the abdomen ; in all normal ones I think at least 10° beyond a right angle. If it will not go easily beyond the vertical or 90° the limitation of flexion is to be noted.

Of these sixteen cases, in one flexion was limited at 85°, in six at 90°, in one at 95°, in one at 110°, in one at 115°. In two, flexion is stated to be limited but the exact degree is not given and in four the record is deficient on this point. I think that probably flexion was limited in these four cases also, but no record is given because in an especially restless child it is often difficult to obtain exact data concerning this matter.

To determine whether extension is limited, the pelvis is fixed by firmly flexing the sound limb until the spine rests on the table without lordosis. This fixation is surely obtained, if the flexed leg is held by the child's arm placed at a right angle under the popliteal space (after the method devised by Mr. Thomas, of Liverpool). Then slowly extend the suspected limb. This should go easily to the table or to 180° In fact the normal thigh is always capable of hyper-extension. If there is no limitation of extension at 180°, a further test should be made as follows : turning the child over on the abdomen, place one hand on the sacrum to hold down the pelvis, and lift each limb in turn by grasping it at the ankle. Any difference is easily noticed. Of these sixteen cases, seven were seen so early that hyper-extension only was limited, that is extension was limited at 180° in seven cases. One case was limited at 175°, three at 170°, three at 160° and in three the limitation was present but the degree not recorded. Thus all these sixteen cases showed limitation of motion in this direction.

Loss of normal abduction, adduction and rotation are easily elicited by testing both limbs at the same time and comparing the range of motion. No special care is necessary in fixing the pelvis. Any hip joint affection that limits flexion and extension causes limitation in these directions also. Yet testing these motions is useful in excluding causes outside the joint that limit flexion and extension. Exactness of measurement whereby the progress of a case can be followed, is so difficult in these three directions, that although it has been our custom to consider them for diagnostic purposes, the facts have sometimes not been recorded. However ten cases are noted as having abduction limited, eleven adduction and eight rotation. If then we find a healthy child who has had an unexplained hip limp for several weeks ; with pain, restlessness at night, and tenderness, either present or absent ; but with atrophy and limitation of motion in one or more directions, can we make a *probable* diagnosis of early hip-joint disease ? Not unless we can exclude the following conditions : 1. *Lumbar Ostitis* or low Pott's disease. Long before a protuberance appears in the back, the irritated psoas muscle contracts, thus limiting extension at the hip and causing a limp. Yet close examination will show that all motions of the hip joint except extension are absolutely normal. In testing for abduction, adduction and rotation care must be taken to flex the thigh before doing so, in order to relax completely the psoas muscle. Flexion of course is normal. Any lumbar disease that irritates the psoas will also cause some rigidity of the back and thus the diagnosis is confirmed.

2. *Congenital dislocation of the hip.*—By a careless observer this is easily mistaken for an arthritis. It is more common than usually considered; twenty-five cases appeared at the institution during the year ending September 1891, or more than one for every ten cases of tubercular disease at the hip. They are usually sent with the latter diagnosis. Even without the history of a limp since the child began to walk, a diagnosis can be made from the following objective symptoms: 1st, The waddling character of the limp; 2nd, shortening always half an inch or more, which is never found in these early joint cases; 3rd, the high position of the trochanter above Nelaton's line; 4th, the limitation of motion is seen to be mechanical from the relation of the head of the femur to the acetabular rim, and not spasmodic from muscular action; 5th, the entire absence of tenderness.

3. *Rheumatism.*—Mon-articular rheumatism is a rare thing in children. It resembles the more acute invasion of the tubercular process, but the tenderness and pain are greater and motion much more limited in a rheumatic joint. The subjective symptoms are more marked than the clinical appearance of the joint warrants. The presence of a cardiac lesion, or of one of the conditions allied to rheumatism, as chorea, tonsilitis, etc., or a rheumatic family or personal history makes the picture clearer. A few days' medical treatment is often decisive.

4. *Inflamed inguinal glands* may cause a limp that simulates very closely the limp of an early arthritis and cause a limitation of both flexion and extension. A careful local exmination will detect them and usually the cause as well. This may often be the retained sub-preputial secretions.

5. *Synovitis due to traumatism* presents the same symptoms as early hip disease and a diagnosis between the two is often impossible. An abrupt onset of symptoms always suggests an injury, while a more gradual beginning, especially if following an infectious disease, suggests a different pathological process.

However, the best treatment for synovitis of the hip in a child, that does not rapidly improve under ordinary measures, is exactly the same as for early hip joint disease. Bearing in mind that an uncured synovitis in a child is a most inviting place for tubercular process, a wise surgeon will use every effort to accomplish a *perfect* cure.

In conclusion, permit me to state exactly what I think these reported cases show. A marked uniformity in the early subjective and objective symptoms was present in these sixteen cases, whose diagnosis is undoubted. However this does not prove that every case that shows such symptoms is in the early stage of a chronic and probably tubercular arthritis. A positive diagnosis cannot be made at this early stage; but to wait for deformity and rigidity to develop in a child's lame hip before taking measures to prevent it, is equivalent to waiting for consolidation and cavities in a lung, before commencing the then hopeless battle against phthisis, or for a typical picture of mammary carcinoma in a woman of forty who has a small, hard nodule in her breast, before interfering surgically.

A study of these early cases in groups will enable one to make a probable diagnosis, and I urge that on such a diagnosis, scientific, conservative treatment should be instituted.

I am convinced that a suitable brace, properly fitted and watched by the surgeon, will cure symptoms similar to those presented by these sixteen cases. A useful and very often a perfect joint can be obtained. Time alone forbids my reporting cases to substantiate this belief.

Case.	Age.	Contagious Disease.	Duration of limp.	Pain.	Night Cries.	Tenderness.	Atrophy Thigh.	Limitation of Motion.
1	4	Yes.	12 days.	Yes.	Yes.	Yes.	—	Fl. 115°, Ext. 180°, abd. add.
2	5	Yes.	14 days.	No.	No.	No.	—	Hyper. Ext., abduc.
3	7	No.	*7 days.	Yes.	Yes.	Yes.	½ in.	Fl. 90°, Ext. 170, abd. add. rotation.
4	5	Yes.	12 days.	No.	No.	Yes.	—	Hyper Ext., add.
5	4	Yes.	8 days.	Yes.	Yes.	Yes.	—	Fl. 90°, Ext. 180°, abd. add. rotation.
6	10	Yes.	6 weeks.	Yes.	Yes.	Yes.	½ in.	All motions limited.
7	6	Yes.	3 weeks.	Yes.	Yes.	Yes.	?	Fl. ? Ext. 170°.
8	5	Yes.	3 weeks.	No.	§Yes.	?	½ in.	Fl. 110, Ext. 180, abd. add. rotation.
9	5	Yes.	†1 year.	‡Yes.	No.	No.	1 in.	All motions limited.
10	10	?	3 mos.	Yes.	No.	Yes.	1 in.	Fl. 95°, Ext. 170°, add. rotation.
11	5	Yes.	3 mos.	No.	No.	?	¼ in.	Fl. ? Ext. 180°, rotation.
12	6	Yes.	†1 year.	‡Yes.	No.	No.	1 in.	Fl. 85°, Ext., 160.
13	?	Yes.	3 mos.	No.	No.	No.	1 in.	Fl. 90°, Ext. 180°, abd. add. rotation.
14	5	Yes.	5 mos.	Yes.	Yes.	No.	1 in.	Fl. 90°, Ext. 180° abd , add. rotation.
15	6	?	†7 mos.	No .	No.	No.	¼ in.	Fl. 90°, Ext. 160°.
16	8	No.	†1 year.	Yes.	No.	No.	1 in.	Fl. 90°, Ext. 180°, abd. add. rotation.

* Had limped a few days two months before.

† Occasionally.

‡ Very slight.

§ Last week only.

TREATMENT OF THE NIGHT SWEATS OF PULMONARY TUBERCULOSIS—PERSONAL CASES.

BY HENRY CONKLING, M. D.,

Assistant Visiting Physician, St. Peter's Hospital.

For some five years past I have carefully conducted a series of experiments to test the efficacy of certain drugs in the treatment of the above condition.

Of all the multitudinous symptoms which pulmonary tuberculosis presents, with all the vagaries that these manifest in the clinical histories of individual cases, there has been no condition which I have found easier to combat with success than the night sweats. I make this statement without qualification, and without hesitancy, especially at this time, when my cases have grown to a large number.

In the first part of the series the fact was repeatedly noted that in severe cases with marked sweating the symptom, under treatment, soon diminished, and in a comparatively short time entirely disappeared, so that early in the tests the line of observation became two-fold. The object was not only to use the most successful drugs, but also to ascertain which of these produced the diminution and the cure of the sweating with *the least injurious or unpleasant after-effects.*

Certain of the remedies that are regarded as anidrotics leave their impression on the patient, as shown by the condition the next morning. Either the vascular system direct, or the vascular through the nervous, will be affected. Or some disturbance may result in the stomach or intestines. This is the more objectionable as a perfectly acting alimentary canal is the safeguard of every case of pulmonary tuberculosis.

I am aware that many cases of pulmonary tuberculosis in hospital practice are admitted in such a bodily condition that every system is working imperfectly; and that with improvement in surroundings, proper food and good nursing the general condition improves. With this improvement may come some changes in the special symptoms of the disease. Sweating is sometimes one of these conditions. Yet, on the other hand, we find, in private, cases where this rule is not present.

I have been careful, therefore, not to include in this report any cases where general improvement soon came, and where the sweating might have disappeared without special treatment.

The object has been to test individual drugs. *No combinations have been used.* Many remedies have been employed; eight only are reported, these having had the largest number of administrations.

1. Aromatic Sulphuric Acid.

This is at times a useful remedy. It possesses some marked disadvantages. It could not be used for any length of time; it frequently produced constipation, and it interfered, after a time, with some special lines of treatment devoted to the pulmonary lesion.

The remedy was given in sweetened water; or, if not objectionable to the patient, in water alone. The dose used was ♏x or ♏xv at bedtime (one dose); or it was given in three doses, in ♏vii to ♏x each dose. The first of these was given in the late afternoon, the second in the early evening, and the third at bedtime. The latter method was found the better.

This remedy diminished the sweating in all the administrations, but stopped it in less than half. But it never stopped the sweating at once; diminution always came before cessation.

2. Camphoric Acid.

Camphoric acid was found to be very uncertain in its action. Its successes and failures did not seem to bear any relation to particular cases. It sometimes would succeed where before it had failed. It had no after effects.

The dose given was gr. xxx in water at bedtime.

This remedy had a large number of failures. It diminished the sweating in a very few; and was successful in a little over one-third of the administrations. But, even in some of these the perfect cutaneous dryness of some other remedies was not noted.

3. Chloralamid.

This was found to be a very important and valuable remedy. Mention of its use as an anidrotic has appeared in print several times. My own knowledge of its power in this direction was obtained by accident soon after its introduction into the American market. The drug was being used in tubercular patients as a hypnotic. The patients, after giving their answer as to the effect of the "sleeping medicine," would frequently say that the sweating was less or absent. This was repeated so many times that finally the drug was tested. It was found to produce sleep, stop cough and stop sweating. It had no disadvantages, either producing the desired result or being inert.

Chloralamid was given in one dose of gr. xxx or gr. xxxv., at bedtime, either in powder or in the form of Schering's elixir.

The remedy diminished the sweating in less than one-fourth of the administrations, failed in about the same number, and succeeded in over one-half. Even in severe cases the first administration was frequently successful.

4. Muscarine.

This was the least successful of all the remedies. It had no after-effects. Indeed, judging from the action of the chief members of its family, one would expect rather some favorable vascular or nervous action.

It was given in pill form at bedtime, in doses of one-sixtieth of a grain.

This remedy stopped the sweating in only 20% of the administrations; failed absolutely in 40% and diminished it only slightly in the remainder.

5. Oxide of Zinc.

The experience with this drug showed that there was no particular idiosyncracy required on the patient's part to produce the good results. It was also interesting to note that the element of time was not needed. It was not necessary to use it in repeated doses to produce the effect desired. In many cases the first administration would stop the sweating. But if the first few doses were not successful, the latter ones seldom were. Another feature in this drug was that, when other remedies had failed, the first dose of the oxide of zinc would be frequently successful. It had no after-effects.

It was given in pill form at bedtime in doses of gr. IIss.

This remedy stopped the sweating in two-thirds of the administrations, the others somewhat reduced it, or failed entirely.

6. Agaricin.

This was the most successful of all the drugs. It produced most excellent results in young subjects. Under its use the skin remained in a dry condition, without suspicion of any kind of cutaneous activity. It was very successful in cases where, during its use, the sweating had disappeared, and had returned after the drug had been discontinued for a time. Repetition did not weaken its power. Of all the remedies it acted best in the first few administrations. Subsequent ones sometimes failed. It can be used for any length of time and has no disadvantages.

Agaricin was given in pill form, gr. $^1/_{12}$; one pill at bedtime, or a pill late in the afternoon, and a second in four or five hours.

This remedy diminished the sweating in one-eighth of the administrations, stopped it in three-fourths, and failed in the remainder.

7. Atropine.

The study of these cases has shown that atropine and belladonna are not the best anidrotics. They are frequently used in a routine manner. In these cases some difference in their action was noticed. Atropine is a powerful heart drug and acts on that cardiac nerve, the branches of which it is not always best to stimulate in pulmonary tuberculosis. It has after-effects. Restlessness, insomnia, disturbing dreams, modifications of secretion were noted. Even the good effects of checked perspiration were sometimes counterbalanced by these disadvantages.

It was given in tablet or in solution in doses of gr. $^1/_{60}$, or less.

This remedy diminished or stopped the sweating in over two-thirds of the administrations.

8. Tincture of Belladonna.

This remedy possesses some of the disadvantages of atropine. Delirium was caused by it (idiosyncratic). The distressing symptoms of laryngeal tuberculosis were increased by it. Diarrhœa was increased where intestinal ulceration accompanied the throat lesion.

The dose used was ♏vii or ♏x, commencing in the afternoon and giving two or three doses.

This remedy stopped the sweating in 70% of the administrations, diminished it in 20% and failed in 10%.

The above brief report deals with some of the points recorded during the treatment of the cases. The smallest possible dose was always used. At present with other remedies the same line of investigation is adopted. But with the above, if the first few administrations do not stop the sweating, another drug in the list is at once tried. Agaricin has given the best results. It must be of the purest quality.

CHOLERA, ITS ETIOLOGY AND TREATMENT; WITH ESPECIAL REFERENCE TO THE LIGHT THROWN ON THIS SUBJECT BY THE RECENT EPIDEMICS.

BY GEORGE T. KEMP, M.D., PH.D.

In referring to the literature of the last epidemic, only those facts have been taken which are comparatively new, and of especial interest as bearing on the subject of this paper; but even so, there has been so much to be noticed that only the briefest abstract of the author's views has been given; and those who are especially interested are referred to the original papers. The following list of abbreviations will be of service to those wishing to refer to the foreign journals:

AIP. Annales de l'Institute Pasteur.
ADM. Annales de Micrographie.
ADM. EX. Archives de Médecine Experimentale.
BKW. Berliner Klinische Wochenschrift.
CFB. Centralblatt für Bacteriologie, etc.
CFMW. Centralblatt für die Medicinischen Wissenschaften.
CFKM. Centralblatt für klinische Medicin.
DMW. Deutsche Medicinische Wochenschrift.
FDM. Fortschritte der Medicin.
MMW. Munchner Medicinische Wochenschrift.
RScM. Revue de Sciences Médicales.
SchJb. Schmidt's Jahrbücher.
ZFH. Zeitschrift für Hygiene.

When other journals are referred to the abbreviations are sufficient to indicate their title.

§ I.

ETIOLOGY.

As the whole question of combating cholera, whether by prophylaxis or treatment depends upon the etiology of the disease, we can not do better than consider its etiology first. The literature of the last epidemic contains much that is new and interesting on the subject.

Since the discovery by Koch, in 1884, of the organism which so frequently bears his name, there has been much discussion as to its etiological relation to cholera, but in spite of all that could be urged to the contrary it has been more and more steadily establishing its claim to being the prime etiological factor, although other conditions undoubtedly play an important, if not an essential part. Among these other conditions may be mentioned individual disposition, and conditions of environment which in a way we do not understand, may modify the virulence of the spirillum or the power of the individual to withstand its invasion.

The researches during the last epidemic have ventilated the subject anew, and what we shall know, after the evidence is all in, will probably be on a more satisfactory basis than before, although we may yet be compelled to modify somewhat our ideas of the relative importance of the part played by the Koch spirillum. As bacteriologists, we demand, before an organism is proved to be the cause of the disease, (1) that it shall be present in all cases of that disease, and (2) that it shall produce that disease when properly given *in pure culture* to a susceptible subject. As to the presence of the spirillum in the faeces of all cases of cholera, the researches during the last epidemic have at least raised a serious question.

Hueppe (BKW, 1893, p. 138) claims to have been the first to describe a case with all the symptoms of Asiatic cholera, in which no spirilla, but only the bacillus coli communis were found. This, he says, was quite some time ago, and he does not give the reference. The most striking work on the subject is that recently published by Lesage and Macaigne (AIP, 1893, p. 19) who report, from 251 cases in Hayem's service, Hospital of St. Antoine, Paris, the following findings:—Koch's spirillum, never alone; Bacillus coli communis, always present; Bacillus coli communis, may be alone; Spirillum + coli communis, without any other bacteria; Spirillum + coli communis + other bacteria. The bacillus coli communis was found alone in 15 cases, and associated with other organisms (not the spirillum) in 30 cases, thus making 45 out of 201 cases with a complete *clinical* history of cholera, and yet failing to show the spirillum on bacteriological examination. The number of spirilla give no clue to the severity of the case. There were mild cases with the spirillum and severe cases without the spirillum, and vice versa.

In the after-epidemic at Hamburg, Rumpel (DMW, 1893, No. 7, FDM, 1893, p. 293) found *cases of genuine cholera when the spirillum was absent, while it was found in the faeces of persons showing no signs of sickness.* Where bacteriological examinations were made continuously from day to day, it was found that the same case showed the spirillum one day and not another. The same was found by Canon Lazarus and Pielicke (BKW, 1892, p. 1215) who report, in particular, one case of diarrhœa in which stools were examined—no spirilla. The patient grew better and had only two to four stools a day, gained in strength, and stools became solid. *On the seventh day from one of these solid stools undoubted Koch spirilla were recovered*, consequently, patient either had the spirilla in him all the time or took them in while at the hospital. Other cases of cholera in which the spirillum was not found even after careful search are also reported.

Nanu (Thèse de Paris, RScM, Vol. 41, p. 578) examined 48 cases and found the spirillum 28 times. Of these 28 cases the organism was identical with the Koch spirillum, and in seven it differed by liquifying more rapidly and by not giving the cholera-red reaction. Sixteen times the spirillum was associated with the bacillus coli communis and once with a bacterium termo.

Kirchner (BKW, 1892) follows with an analysis of 21 cases in five of which he found the Koch spirillum, and in 16 the bacillus coli communis, alone or associated with other organisms, He calls the five cases cholera and the other cholera nostras, and yet he speaks of some of these cases as "dying with all the symptoms of typical Asiatic cholera."

Rumpf, of Hamburg (DMW, 1893, p. 381), under whose care were treated 3,000 cases during the last epidemic, says that *cases giving the full clinical history of Asiatic cholera, and yet failing to show the spirillum on careful bacteriological search, are rare, but they do occur.*

Guttman (BKW, 1892, p. 1020) reports a case as cholera nostras, in which the post-mortem findings were those of cholera, except that the large intestine was more inflamed than is the rule, and the glands were less swollen, the difference was only one of degree and Guttman says it was "after all not considerable." No spirillum was found although the faeces were examined repeatedly throughout the course of the case. Other organisms were present, the bacillus coli communis largely predominating.

Cuffer and Gouget report a case quite similar, and Rénon, of the Hospital Necker (AIP, 1892, p. 621) report four cases in two of which were found the bacillus coli communis alone, in one the bacillus coli communis with the spirillum, and in one the spirillum alone. The report of Cuffer and Gouget's case (Médecine Moderne, 1892, p. 445) is as follows: May 16,—alcoholic excess. May 17, vomiting stomachal and bilious, profuse diarrhœa, cramps, collapse, facies cholerica, anuria, death in 26 hours. An examination of the faeces (Gouget and Thiroloix) 15 hours after the attack and of the intestinal contents nine hours after death showed the bacillus coli communis in pure culture and no trace of any spirillum.

Du Mesnil (MMW, 1892, No. 50, CFKM, 1893, p. 239) mentions the case of a workman in Altona who was taken sick during the night and died next morning. Symptoms all those of cholera. Skin, muscles, intestines, and other organs typical. Special mention is made of the kidneys both on gross and on microscopical examination. "The spirillum was entirely wanting." In the intestines were found straight, short, narrow bacilli, and on the surface of the mucosa some cocci. The intestinal tissue, especially the necrotic patches, and the crypts of Lieberkühn, as well as other favorite seats of the spirillum were most carefully searched but with absolutely negative results. Cultures gave only bacillus coli communis although the culture medium was adopted for cholera as shown by control inoculations. To avoid the objection that the case was possibly one of arsenic poisoning, arsenic was searched for but with negative results.

Some epidemics described as cholera nostras may have been Asiatic cholera. Such a one is reported by Carp (DMW, 1893, p. 35.) There were six cases with all the symptoms of cholera, and the mortality was 100 per cent. He gives the history of all six cases and in speaking of one of them he says "Unter diesen durchaus cholera-ähnlichen Erscheinungen * * * trat der Tod ein." The bacteriologists' report was simply that they regarded cholera as excluded (ausgeschlossen) and the cases went as cholera nostras in spite of their clinical history and the further fact that a distinct connection was traced in some of the cases from a privy to the drinking water.

Cases giving all the clinical symptoms of cholera have been reported where bacteriological examination failed to reveal the presence of any spirillum, but a *streptococcus* was found in the blood and in the stools. Such a case is reported by Beck (DMW, 1892, p. 902).

A woman 44 years of age was taken sick, August 3d, with vomiting and diarrhœa (20 stools in 24 hours). August 5th, cyanotic, voice hoarse, tongue coated. Pulse 84, temperature 36 (96.8° F.) abdomen *en bateau*, faeces reddish brown, very abundant, anuria, hyperæsthesia of muscles shortly after attack, collapse. Death on 6th. Subnormal temperature 35.8 (94.4 F.), no spirilla, streptococci in stools and blood.

The form and biological properties of spirilla from different cases of cholera, even in the same epidemic, are not always the same. The greatest difference has been noticed by Cunningham. (Scientific memoirs by medical officers in India. Part VI., Calcutta 1891, quoted from ADM, Vol. 4, p. 165.) In addition to noting that there are many authentic cases of cholera where the spirillum is wanting, he has obtained from 16 cases of cholera, 10 species of spirilla which differ in liquefying power (one not liquefying at all), and in their growth on potato.

Bleisch (ZFH. xiii, p. 31) has found a spirillum closely resembling cholera in form and in growth in gelatine colonies, but which differs widely from the Koch spirillum in growth otherwise. What makes this organism particularly interesting is the fact that it was recovered from the intestinal contents of a man who, after prodromal diarrhœa. developed choleraic symptoms and died within 24 hours.

Finkelnburg (CFB, xiii, p. 113) compared the behavior, under cultivation, of spirilla from various sources including laboratory cultures, the parent stock of which was from India eight to nine years previous ; laboratory cultures, parent stock from Naples 1884 ; cultures from cases of 1892, in and around Paris and from Hamburg. He compared these different spirilla in eight different ways and found marked differences between the cultures from the 1892 cases and the older ones, but he does not mention any differences between cultures from different cases of the same epidemic.

Notter (CFB, xii, Nos. 11 and 12) is also quoted by Finkelnburg as having pointed out differences in biological characteristics of spirilla from different sources (India, Naples and France). No mention is made, however, in the reference, of organisms from different cases in the same epidemic having been compared. Of course the number of species or varieties that can be made from a number of organisms of the same class depends upon how finely we draw a distinction. That there is considerable variation in form and biological properties of spirilla obtained from different cases of cholera has been noted by a number of observers and is strikingly shown by the article and plates of Dunham (Am. Journ. M. Sc., 1893, pp. 72–80) on work done in New York last Summer. In making a summary of the facts thus far brought before us it strikes us that there are four classes of cases which require closer study to explain them.

1. Cases without spirilla—or those in which careful bacteriological search has failed to reveal them. Also the fact that the greater or smaller number of spirilla, or even their apparent total absence from faeces bears no relation to the severity of the disease.

2. Cases where no spirilla are found but other organisms not usually found in the intestine are present.

3. Cases in which the bacillus coli communis alone is found. Bacillus coli communis, as its name implies, is a common or habitual inhabitant of the intestine.

4. Cases with spirilla varying in form and properties.

Class 1.—*Cases in which spirilla have not been found in the faeces by bacteriological search.* To one who is familiar with the history of the search for the tubercle bacilli in diseased glands, or who has ever attempted to search for tubercle bacilli in sections of tuberculous tissue, the answer must surely have come as a mental suggestion, "they are there but were not found." In the first place we know that the spirilla burrow into the epithelium and a favorite seat for them is next to the basement membrane. From here they are carried out by a desquamation which does not always take place, and which may take place one day and not another, thus accounting for the presence of the spirillum in the faeces one day and not another in the same case, especially when the case is not severe. Again, granting that some are free in the intestine and are carried out with every stool, they are often so out-numbered by other organisms that an almost infinite number of plates or Esmarch tubes of the second or third dilution would have to be made to detect the cholera colony by the side of all the others growing with it. The method of Schöttelius is effective only when certain organisms are absent, for with bacteria more strongly aerobic they will collect to form the scum more than the spirillum of cholera. This has been noted by some observers who prefer simply to use a larger number of plates and adopt the ordinary method. Whether the suggestion of Karlinski (CFB, Vol. viii, p. 45) of adding pancreas bouillon to the gelatine will be of valuable aid to us remains to be seen. It is highly praised by Arens (FDM, 1893, p. 292) and others. We must acknowledge, then, that our present methods of research are not sufficiently accurate to allow us to say that because a minute search fails to show the presence of spirilla in the faeces that they are not there, and still less are we able to say that they are not in the intestinal mucous membrane or glands.

That the number of spirilla found by plating the faeces should not stand in any relation to the severity of the disease is what we should expect; for we may or may not happen to strike a rice flake or clump particularly rich in them, but that the continued absence of them should bear no relation to the severity of the case is not so easy to explain.

Gaffky (BKN, 1893, p. 413) denies that this is true and criticises the work of Lesage and Macaigne. He quotes reports from Hamburg, that the spirillum was found in all cases that died in the first stages during the height of the epidemic. He admits, however, that three cases out of 55 were found in the after-epidemic, in which the most careful search failed to reveal their presence. Again quoting from reports of the Moabit Hospital, Berlin, he says that of 30 cases where the spirillum was present, the mortality was 50 per cent., while in 207 "*suspect*" cases where it was found to be absent there was only one death (mortality less than half per cent.). The experiments of Lesage and Macaigne were most carefully made, however, and appear to be perfectly trustworthy.

On the theory that the greatest evil in cholera is the poison manufactured by the spirilla and absorbed from the intestine, we should certainly expect that the worst cases would have a sufficiently large number of spirilla in the intestine to make their presence easily demonstrable in the faeces; but here comes in the individual disposition or power of the individual to withstand the poison, and one man may go into collapse from a small amount of poison that would not seriously affect another. Then, again, the *virulence* of the organism and the rate of its growth may be very different as Lesage and Macaigne point out; and a few virulent spirilla imbedded in the mucous membrane and making poison in one case, may do more harm than myriads of less harmful ones multiplying in the intestine and being swept out in the frequent stools, to be found in large numbers by the bacteriologist. From a consideration of both sides of the question, therefore, we can safely say that all the foregoing obstacles can be explained by the imperfection of our best methods, and the anatomical position of many of the germs under the mucous membrane, together with the varying virulency of the spirillum, and the varying power of the individual to resist, and it is more likely that the fault lies in our scant knowledge than that the spirillum is not the most important etiological factor.

Class 2.—*Cases where no spirillum is found but where other organisms not usually found in the intestine are present.* This class includes cases like that described by Beck, when a patient dies with symptoms of cholera and a virulent streptococcus is found in the blood and in the faeces. The question arises: Was the case one of cholera or not? The fact of its occurring when cholera was prevalent opens the question, and it may be a case when the streptococci marked the presence of the spirillum in the examination of the faeces, thus making it a curious case of mixed infection;

but it is quite conceivable that symptoms of diarrhœa, collapse, etc., should be produced by such a serious invasion of streptococci as Beck describes and except for the prevalence of cholera at the time, it would not have been mentioned in this connection.

Class 3.—*Cases in which bacillus coli communis is found to the exclusion of all other organisms.* These cases are the most difficult to explain, for a simple separation of the cholera spirillum from the bacillus coli communis is comparatively easy by Schöttelin's method or by simple plating. Lesage and Macaigne rather lean, as I understand them, to the view that the bacillus coli communis may become sufficiently virulent to produce choleraic symptoms. They regard cholera typhoid as due to the bacillus coli communis which they find to invade the abdominal organs in this stage. It may be that there is a question of virulency from symbiosis, as they suggest also, but the true explanation is likely the one given under class 1, viz., that the spirilla are hidden in the mucous membrane, and are not thrown off freely in the faeces. The theory of symbiosis is championed by Blackstein and Schubenk (Wratch, 1892, p. 1029, quoted from CFB, xiii, p. 440) who find another bacterium associated with the spirillum in all cases examined both at Bakuo and at St. Petersburg. The new bacterium is a bacillus, about as thick as the bacillus coli communis, and two to five times as long as it is thick. It produces in rabbits, ædema, clonic spasms, opisthotonos and death. The discoverers have christened this new organism "*Bacillus Caspicus*" and suggest that it may be necessary to the Koch spirillum in its production of cholera, and may offer an explanation of Pettenkofer's lacking factor "y."

The question of variability of form and virulency of bacteria is one of the most interesting in biology but the subject is too extended to be entered upon here. Suffice it to say that such changes are known to take place in other organisms and it is not surprising that Koch's spirillum of cholera should have to some extent, these properties. Such changes as Cunningham refers to would be strange indeed, but only having seen a review of his work, and not knowing the details, we are not prepared to criticise it. Just what produces these changes, especially of function, has been the subject of much speculation. That the virulency does vary is shown by the fact, that cases toward the end of epidemics are usually milder than at beginning. This is more easily explained by a change in the organism than by a change in the individual disposition of the patients. Another fact most likely dependent on both, is that whole families coming down at the same time have the disease with different degrees of severity.

Lauenstein (DMW, 1892, p. 981) mentions such an instance in Hamburg where a family of father, mother and son were all taken down. The mother and son died, while the father had only moderate diarrhœa. Spirilla were found in his faeces on the eighth day. One fact that speaks for the spirillum taking on increased virulence at certain times, is the fact, that when there is an explosive outbreak the cases are usually worse, and when the greatest number of people sicken the percentage of mortality is highest. This was well illustrated in the Hamburg epidemic as the following table will show :

DATE.	CASES.	DEATHS.	MORTALITY %.
20 Aug.	85	36	42.3
21 "	83	22	26.5
22 "	200	70	35.0
23 "	272	111	40.8
24 "	367	114	31.1
25 "	674	192	26.9
26 "	995	318	31.9
27 "	1103	455	41.2
First Week "	3779	1318	34.00% average.
28 Aug.	1032	428	41.4
29 "	982	394	40.1
30 "	1085	484	44.6
31 "	857	395	44.9
1 Sep.	845	394	46.6
2 "	812	478	57.6
3 "	780	439	56.2
Second Week "	6393	3012	47.3% average.
4 Sep.	679	292	43.0
5 "	582	281	48.0
6 "	491	258	52.5
7 "	424	225	53.0
8 "	354	160	45.0
9 "	354	155	43 7
10 "	439	178	40.5
Third Week "	3323	1549	46.1% average.
11 Sep.	351	150	42.7
12 "	383	139	36.2
13 "	292	129	44.1
14 "	312	103	33.0
15 "	303	139	42.5
16 "	362	138	38.1
17 "	117	79	67.6
Fourth Week "	2119	877	43.4% average.
Sum total first four weeks.	15,633	6,757	43.2

To explain such facts as these Pettenkofer has put forth his theory (MMW, 1892, No. 46, quoted from CFMW, 1892, p. 968). He has always been the chief opponent of the commonly accepted theory, that the spirillum and the proper conditions of the system were the only etiological factors of cholera. He adds a third factor, viz.: the condition of the soil. Stating the case in his own manner, he says that the etiology of cholera depends upon three unknown quantities, x, y and z.

x = a specific germ carried from place to place by man.

y = something which depends upon time and place (Zeitlich ortliche disposition).

z = individual disposition which favors or prevents the body from being a proper soil for the disease.

During the epidemics of 1892 he claimed that the necessary factor, "y," did not exist in Munich owing to the dryness of the soil, and in order to prove that the spirillum alone, plus the conditions of system which are ordinarily supposed to predispose to cholera, were not sufficient to produce the disease, he made the following experiments on himself. He drank cholera cultures, 24 hours old, just received from Gaffky, in Hamburg, at the same time taking one gramme of sodium bicarbonate to neutralize the gastric juice. After 48 hours he was seized with diarrhœa which lasted three days, and consisted of watery, nearly colorless dejections. He also had rumbling and gnawing in the belly. His general feeling of comfort was, as he alleged, not disturbed (Das subjectiv Befinden war, angeblich, nicht gestört). From the second to the seventh day cholera bacilli were found in great numbers, partly in pure culture. Emmerich tried the same. He ate stuff to disorder his stomach, then took one c.c. of a 24-hour bouillon culture. The following night he was seized with diarrhœa, next night came rice water stools, of which he had 40 in two days. Took tannin by mouth and per anum. Spirilla were present, mostly in pure culture, in his faeces for ten days in all, and nine days after taking tannin. General condition undisturbed, appetite first class (vorzüglich), rumbling in the belly, hoarse voice and dry throat. Urinary secretion not diminished.

Pettenkofer's experiment, according to Gaffky (DMW, 1893, p. 381) proves Koch's theory, for they did not reach the collapse stage in spite of the fact that the spirilla came from Hamburg, where the time and place were favorable for virulence of the organism, if not for individual disposition.

Again, Gaffky (BKW, 1893, p. 413) refers to the epidemic at

Nietleben, where the weather was too cold for growth of the spirillum in water or soil, which is against Hüppe's miasmatic and Pettenkofer's theory, that the spirilla must grow in the ground to become virulent. The experiments of Pettenkofer and Emmerich prove what has been amply shown by statistics from Hamburg, and elsewhere, that the spirilla may be taken in without producing any dangerous disturbance ; and indeed it has been found, in the secondary or after epidemic at Hamburg, that the faeces could be full of spirilla and the patient have no sign or feeling of sickness. In conclusion let me quote the opinions of a few prominent men as expressed at the Wiesbaden Medical Congress of German Physicians, April 12, 1893.

Rumpf (BKW, 1893, p. 412) says that the comma bacillus must be regarded as the etiological cause (ätiologisches moment) of Asiatic cholera, although its presence in the intestine by no means necessarily leads to cholera or a cholera-like sickness. In spite of the presence of the cholera bacillus in the intestine, a bacteriological search for it by the plate method can give a negative result for days at a time. The comma bacillus is first in importance, individual disposition, second, and time and place are quite behind these.

Rumpf (BKW, 1893, p. 412) also mentioned the fact that in the *after-epidemic* in Hamburg there were *63 cases of genuine cholera*, 6 cases of cholera nostras and 124 cases of suspicious diarrhœa with negative bacteriological findings.

At the same congress Gaffky (BKW, 1893, p. 413) said : "This much is settled, *the cholera vibrio is found only in cholera.*" His expression "Nun bei der cholera" will have to be stretched to mean "Only when cholera is about," when we consider the cases in which the faeces of apparently healthy persons were found to contain them.

Fraenkel, of Hamburg (DMW, 1893, p. 381), said that the spirillum is the only constant etiological factor. Cases in which the most painstaking search fails to reveal the spirillum should not be put down as cholera, even when occurring during cholera epidemics. He emphasises the necessity of paying especial attention to the kidney at autopsies, but says : "*The presence of the Koch spirillum alone decides the diagnosis.*" With this, Senator (DMW, 1893, p. 381, Idem. p. 392) agrees. In spite of the distinguished authority on the other side, this method of reasoning ought not to go unchallenged. To start out to find whether a certain organism is the cause of a disease, and then say that only those cases in which it is found should be called by that name, is certainly reasoning in a circle and settling the question at once by dogmatic dictum. In circumstances like the present the results might be disastrous, for we could have cases of true cholera smuggled in under the name of cholerine, cholera nostras, or by whatever name one may choose to call it, merely to support a theory which, in all probability, will in time be proven true, but only by careful observation and more extended experiment, and not by ignoring clinical symptoms to save a hypothesis, however valuable.

(To be continued.)

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EDITORIAL.

COMPULSORY VACCINATION.

Have Boards of Health the right to compel such persons to be vaccinated, as, in the judgment of such Boards, should be vaccinated? This question is an exceedingly important one, and, one, upon which, so far as we know, no judicial decision has ever been given, save the one to which we are about to refer.

This decision was called forth by the action of the Health Commissioner of Brooklyn in endeavoring to require two expressmen to be vaccinated. The decision which was adverse to the Commissioner, has, we are glad to know, been appealed by him, and we hope that it will be carried to the court of last resort, so that the question may be finally determined.

The decision of Justice W. J. Gaynor, of the Supreme Court was essentially as follows: "To justify this action the Commissioner makes written return to the writ that, as the petitioners are expressmen, and therefore go about and carry goods, they are, in his judgment, 'unusually exposed' to small-pox contagion. Therefore he ordered them to be vaccinated, and they refusing to submit their bodies to vaccination, he ordered quarantine to be placed upon said premises and that said persons be detained therein until they consent to be vaccinated. If the Commissioner had the power to imprison an individual for refusing to submit to vaccination, I see no reason why he could not also imprison one for refusing to swallow some dose. But the Legislature has conferred no such power upon him, if, indeed, it has the power to do the like. Chapter 661 of the Laws of 1893 (Section 24), empowers all health boards to 'require the isolation of all persons and things infected with or exposed' to contagious or infectious diseases. There is no claim that the petitioners are infected, or have been actually exposed, to infection. But even if they were subjects for isolation by reason of infection or exposure thereto, they could only be detained while such, and not indefinitely, until they yielded their bodies to vaccination. The same act directs health boards to provide vaccine virus, 'and at all times provide thorough and safe vaccination for all persons in need of the same.' This falls far short of authorizing the imprisonment of those who refuse to be vaccinated. . . . If the Legislature desired to make vaccination compulsory it would have so enacted.

"My attention is also called to Section 5, of Title 12, of the Charter of Brooklyn, which is that in the presence of great and and imminent peril of the public health, it shall be the duty of the Commissioner of Health 'to take such measures, and do and cause to be done such acts, and make such expenditures beyond those duly estimated for and provided, for the preservation of the public health from such impending pestilence, as he may in good faith declare the public safety and health to demand, and the Mayor of said city and the President of the Medical Society of Kings County shall also in writing approve.

"This does not mean that the Commissioner may take unlawful measures or do unlawful acts. It must be interpreted in the light of the Constitution and settled legal principles and safeguards. It does not confer on the Commissioner the right to imprison any more than to take life.

"I need not discuss here the right to isolate or quarantine in times of pestilence. That right grows out of the overwhelming necessity of the case and has its limitations. It is not being exercised here, for the petitioners are not being held in isolation as subjects of danger to the community, to be released when their bodies are no longer sources of infection, but they are being forcibly confined because they refuse to submit to vaccination and until they do submit thereto. The petitioners are discharged."

THE RIGHT TO EXCLUDE UNVACCINATED CHILDREN FROM PUBLIC SCHOOLS.

The Superior Court, at Hartford, Conn., has decided, in a suit brought against the New Britain School Board to compel them to admit unvaccinated children to the public schools, that the law giving the School Board authority to order all school children vaccinated, and to exclude those not vaccinated from the schools, is constitutional.

OBITUARY.

CHARLES PIERSON JAMES, M.D.,

On May 22d, 1894, Dr. James took, by accident, a teaspoonful of tincture of aconite, which caused his death, notwithstanding every effort was made to save his life. He was a graduate of Long Island College Hospital, of the class of 1891, and was highly esteemed by all who knew him.

CORRESPONDENCE.

IN MEMORIAM—CORYDON L. FORD, M.D.

It gives us pleasure to publish the following appreciative letters, called forth by the tribute to Dr. Ford, published in the June number of the Journal.—Editors :

"Adams, N. Y., May 31, 1894.

"Dr. Alex. J. C. Skene,

"*My Dear Doctor* :—Your article, "In Memoriam, Corydon L. Ford, M.D.," fell into my hands to-day, in the June number of the Brooklyn Medical Journal. It was my good fortune to have graduated from the University of Michigan twenty years ago. For five years, in different departments it was my pleasure to listen to the teachings of the great Ford; to know him, not only as a student ; but socially to the present time. Only a few days before his death I was in Ann Arbor, and had the ever-to-be-remembered pleasure of an hour's visit with the great old man. I feel that I can not allow the opportunity to pass, without individually tendering you my heartfelt gratitude for your article.

And, that it was your good fortune, to so well know our mutual teacher; that you have been able to reproduce so perfect a photograph of his teachings, character, and worth. When I had finished reading it, I said to myself: That is the most accurate, truthful, unvarnished eulogy ever made. Your article recalls to my mind so much that was familiar to me. in my student life, the recollections of which have been a guiding star through many trying cases in practical life. May God grant that this article may meet the eye of every one who has sat under Ford's teaching; that it may indelibly restore to their memories the perfect imprint of his life and example.

Very respectfully yours,
A. K. HALE.

CHICAGO, June 1st, 1894.

DR. A. J. C. SKENE,
Brooklyn, N. Y.

Dear Doctor:—I want to thank you for the opportunity I have had of reading a noble tribute to a noble man. Your words touching Ford—the teaching of his life, his example and his intellect must command the applause and hearty Amen of every son who has the privilege of sitting at the feet of such a father.

The better glow of Medicine comes from the work and heritage of such men—the number of whom, alas! is limited. There is one I think I can mention who is still with us here, the influence of whose beautiful life I am sure we all keenly feel. DeLaskie Miller, a class-mate of Ford's I believe, and whose life has run along the same channel of pure and lofty teaching with a winsomeness almost feminine, is waiting, not with the harness on—as was Ford—but probably in the better way, for one who has been a most active practitioner, of throwing aside all the cares of bread-winning and resting with thought and the communion of a host of friends.

With assurances of esteem I beg to remain
Very truly yours,
GEO. HENRY CLEVELAND.

TEACHING OF PRACTICAL ANATOMY.

KEOKUK, IOWA, May 31, 1894.

To the Editors of THE BROOKLYN MEDICAL JOURNAL:

An excellent paper by Dr. Wm. W. Browning, published in the BROOKLYN MEDICAL JOURNAL for June, 1894, says:

"*Human dissections were revived by Andrew Vesalius, in 1560,* and, during the next two centuries followed, with practical results, by many eminent anatomists." (Italics mine.)

Kindly permit me to say a few words about Andreas Vesalius, the Luther of Anatomy. This wonderful young man before his thirtieth year, had finished the most accurate, complete and best illustrated treatise on anatomy the world had ever seen. Jan Stephan van Calcar, favorite pupil of the renowned Titian drew the figures from actual dissections, and the best engravers cut them in wood to adorn that grand old folio, entitled, *De Humani Corporis Fabrica,* which was published at Basel in the year 1543. This, however, was not the first of the books of Vesalius. In 1537 his *Paraphrasis in Nonum Librum Rhasæ* was given to the world; and two years later he produced an anatomical treatise, *Additiones et Correctiones in Guintheri Institutiones.* In 1542, his *Epitome* appeared, containing many anatomical plates. Thus it will be seen that Vesalius had given the world the benefit of his matchless dissections long before the year 1560.

Another point and I am done, Dr. Browning states that "Human dissections were revived by Andrew Vesalius," etc. That is not correct. The practice of dissecting the human body in preference to the bodies of apes, dogs and swine, was revived about the year 1315 by Mundinus, of Bologna. For two centuries before the birth of Vesalius the dissection of the human body was practiced at intervals.

Very truly,

James Moores Ball,

Prof. of Ophth. and Lect. on the Hist. of Med. in the Keokuk Med. Coll., Keokuk, Ia.

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155 Reid Avenue (Cor. Monroe St.),

Brooklyn, N. Y., June 5th, 1894.

To the Editors of The Brooklyn Medical Journal:

In the article above referred to, which, by the by, was not written from the historical standpoint, I did not intend to fix the date upon which Vesalius made his first dissection, nor to deny that many individual anatomists may have made such dissections in any age preceding him. Discussing the practice as a feature of medical education, and dealing in epochs rather than in exact dates, I do not believe I was far out of the way in fixing the date of the influence of this eminent anatomist's methods upon the practical work of the schools at near the time of his death (1564), when he had achieved his greatest popularity.

All hail to the men who braved popular prejudice in the cause of human knowledge, but it still seems to me that the honor of having re-established the art of human dissections as an essential part of a medical course belongs to Andrew Vesalius.

Respectfully,
Wm. W. Browning.

PASTEUR TREATMENT OF HYDROPHOBIA.

To the Editors of The Brooklyn Medical Journal :

The inclosed letter received ten years since in answer to inquiries for a preventive for a patient bitten by a pet dog that had undoubted hydrophobia, from the history, symptoms and post-mortem evidences (made by me) may be interesting to your readers :

Paris, 9th August, 1884.

Sir : In the absence of Mons. Pasteur, who is at Copenhagen, I answer the letter you have addressed him.

In an animal dead of hydrophobia there is nothing virulent, except the saliva, the salivary glands, and the nervous system. The blood, the muscles, the entrails, do not appear to contain the rabid virus. I do not know of an example of the inoculation of hydrophobia, through an autopsy. The modified virus that you ask for is still under study, it has not been tried at present on any other subject outside of dogs. In its actual state of my own knowledge Mr. Pasteur would not dare to try it, at the moment, on man.

Receive sir the assurance of my most distinguished consideration,

Dr. Roux,
Sous Directeur Adjt. of the
Laboratory of M. Pasteur.

In contrast to what ten years have done I attach the following report :

The report of the Pasteur Institute in Paris for the treatment of those who have been bitten by dogs supposed to have the hydrophobia shows that in eight years, or since 1886, there have been 14,430 persons treated, and the deaths were only 72, or less than one in 200. For the three years past it has been but about one in 400.

Yours truly,
A. S. Heath, M.D.,
205 Patchen Av., Brooklyn, N. Y.

PROCEEDINGS OF SOCIETIES.

BROOKLYN GYNÆCOLOGICAL SOCIETY.

Meeting of March 2, 1894.

Dr. J. L. Kortright presented the paper of the evening entitled, "The Prophylaxis of Abortion," which was discussed by Drs. Chase, Jewett, McNaughton, L. G. Baldwin, Matheson, F. Baldwin.

Dr. Kortright referred to the health of the first child as affected by the mother having had or not having had a miscarriage prior to the birth of her first child, and suggested that the members of the society make a study of this subject. He offered the following resolution, which was adopted :

Resolved, That this subject be taken up as one for collective investigation by the members of the society, the result to be presented at the next meeting of the society after the regular paper of the evening, Dr. Kortright to submit the points he wishes studied in a brief statement which will be forwarded to the members of the society.

PRESENTATION OF CASES.

Dr. Charles Jewett : I might mention a case which is of interest in relation to the subject of early diagnosis of pregnancy. I have been accustomed to believe that compressibility of the isthmus uteri to less than half a centimeter means pregnancy, and that no pathological condition can simulate this sign. The case, however, to which I refer was an exception to this rule. The woman was delivered seven weeks ago. I was requested to see her owing to the existence of fever which developed late, and which was apparently malarial. In other words, had no bearing upon the condition of the pelvic organs. The uterus was somewhat longer than it should be, but not proportionately thickened antero-posteriorly and laterally—the uterus of sub-involution. The body and the cervix had the usual normal density of the non-gravid uterus while the isthmus was so much softened that I could compress it to a fraction of a centimeter. There was a typical Hegar's sign without pregnancy.

Dr. W. H. Skene read the following :

321 N. Grand Ave.,
St. Louis, Feb. 20, 1894.

Dr. A. J. C. Skene, Brooklyn, N. Y.

Dear Doctor : Appreciating the interest you take in any case out of the accepted conditions assumed to be possible, I write you of an ovarian pregnancy which fortune put in my way. While in Butte, Montana, a year and a half ago, I was called to see this case, which I believe to be of sufficient interest to record. I dislike journal writing, so many are doing that, but thought I would give the history to you to use if it be of value.

Mrs. M., family history good, age thirty-eight, medium height, well built, even temperament, moderate circumstances and as a rule does her own work. At sixteen years she menstruated for the first time, but for three months following nothing more showed itself. The fourth period, however came with pain, slight but normal every other way, in which condition she still remained until married at twenty-one years of age. In 11 months afterwards she gave birth to a healthy living child. In two years she became pregnant again, but from some unexplainable cause she aborted when two months along. I can get no history of trouble before or following abortion. In 1889 she married a second husband, having been a widow about six years. Second husband a healthy man, no venereal history. In March, 1892, she aborted at two months. In September I examined her and found evidences of corporeal endometritis and a very tender tube on right side. Her circumstances, I learned afterward, prevented her being treated at the time and I lost sight of her until January, when I was again called to find her in bed suffering from a good deal of spasmodic pain, simulating that of abortion, and a dark bloody discharge from the uterus. I then obtained this history from her. Middle of October her periods stopped; in November she began to have pain in the right side extending into thigh, which was very severe at times; in December there appeared some occasional dark discharges followed and and accompanied by these pains, at which times she would also become very weak having to lie down. When I saw her, walking was almost impossible because of the pain in the right side when the limb was extended. She had no temperature, pulse full but rapid—120. Occasional nausea, but complained most of flatulency. Her bowels were constipated and hard to move even with severe purgatives. I found on examination a tumefaction in right side of pelvis rising into the abdominal cavity, no fluctuation discoverable, tube was large and could be rolled between fingers, and the womb was also enlarged, some thickening in pelvic sub-structures, nothing discovered in left side.

January 12th, I did a median section and removed the tumor which proved to be ovarian, and also the large tube. Adhesions were complete but readily broken up without much hæmorrhage. In three weeks she was up and discharged. Health since has been quite good, but she has pain on menstruating and does so not so freely as formerly.

On splitting open the tumor I found a fœtus in the centre about as far advanced as we expect to see in a month and a half uterine conception; membranes were well developed but there was no connection with the surrounding stroma. The villous chorion did not exist apparently. The stroma about the fœtus was about a half inch or a little more in thickness. Here and there near the periphery and on its surface were a few cystic formations containing a rather ichorous fluid. The tube was thickened and enlarged to almost two and a half times its normal size. The pregnancy being so centrally located in the ovarian stroma is of interest to me, and I hope will be so to you. Yours truly,

T. C. Witherspoon.

Dr. Chase: It seems to me, Mr. President, that this is instructive, demonstrating, it would seem, that pregnancy can take place within the structures of the ovary itself. At least that would seem to be the inference to be drawn from the case as recorded here. I believe it is a very rare occurrence that pregnancy takes place at that point.

Dr. Jewett: The existence of ovarian pregnancy is I think an open question. Primary ovarian pregnancy I believe is more than doubtful, most of the reported cases are doubtless to be explained as having originated in the pavillion of the tube and subsequently acquired attachment to the ovary.

An Edinburgh authority, Webster, I think, has recently discussed the subject of primary ovarian pregnancy. His study is made from the histological standpoint and the claim made that a mucous surface is the only one upon which the ovum can take root and grow. In the case reported the findings so far as stated do not, I think, establish the writer's claim. The tube was enlarged and that looks as though it had something to do with the subsistence of the ovum, for a time at least. I am inclined to look upon this and all cases of ectopic gestation as having a tubal origin.

William H. Skene, M.D.,

Secretary.

BROOKLYN PATHOLOGICAL SOCIETY.

The 356th regular meeting was held March 12, 1894. The meeting was called to order at 8:30 P. M., the President, Dr. Belcher in the chair, twenty-three members present. The Secretary being absent on account of illness, Dr. Archibald Murray very kindly acted in that capacity. The minutes of the preceding meeting being very long, and the acting-Secretary not familiar with them, it was decided on vote of the Society to omit the reading of the minutes and to pass directly to the scientific portion of the meeting. Drs. Van Cott and Seymour then presented a paper on "Cellular Pathology from the Modern Standpoint," illustrated by lantern projections of the photo-micrographs of Drs. Karg and Schmorl, of the Pathological Institute, Leipzig.

The lantern pictures thrown upon the screen were particularly beautiful, clear, clean-cut photographs of the original plates. Each slide was described in detail by Dr. Van Cott as it appeared, making a very interesting and valuable demonstration, more especially as these pictures have never before been shown in this country and represent the work which has been going on among the German pathologists during the past twenty years, and which is of such a character that no amount of enthusiasm concerning it could be thought unseemly.

The slides, briefly, were as follows:

1. The morphology of the nucleus, showing the various stages of nuclear division in the multiplication of the cell.

2. Fatty degeneration of the epithelium of the kidney in case of phosphorus poisoning. Fatty infiltration of liver. Amyloid degeneration of liver. Corpora amylacea from prostate. Hyalin degeneration of lymph-gland. Colloid degeneration of salivary gland.

3. Pigmentation of the liver in pernicious anæmia. Senile atrophy of liver. Emphysema of lung. Pigmentation of glomerulus of kidney. Nutmeg liver.

4. Grey degeneration of posterior columns of spinal cord. Atheromatous degeneration of cerebral artery in syphilitic gumma. Pachymeningitis ossificans. Coagulation necrosis of liver.

5. Hæmorrhage into muscle. Acute pulmonary congestion following extensive burns. Septic thrombus. Organizing thrombus. Canalization of thrombus. Brown induration of lung.

6. Hyaline thrombus in kidney. Discrete myocardiac abscess. Cortex of kidney with septic infarction. Hæmorrhagic infarction of lung. Contracted kidney.

7. Acute Catarrhal bronchitis. Purulent bronchitis. Furuncle. Inflamed skin. Acute purulent inflammation of the skin. Acute purulent inflammation of the meninges.

8. Catarrhal pneumonia. Croupous exudate in alveolus. Cheesy pneumonia. Beginning diphtheria of epiglottis. Diphtheritic inflammation of intestine and palate.

9. Acute nephritis. Acute interstitial nephritis. Contracted kidney.

10. Chronic pneumonia. Hepatic cirrhosis. Endarteritis obliterans. Peri-splenitis. Hyperplasia of gall ducts. Chronic interstitial myocarditis.

11. Abdominal typhus. Peyer's patch. Typhoid bacillus.

12. Bacillus tuberculosis. Cheesy pneumonia. Reticulated tubercle. Cheesy tubercular lymph gland. Tuberculous peritonitis. Swine tuberculosis. Tuberculosis of the liver.

13. Tuberculosis of tongue. Lupus. Tuberculosis of skin. Tuberculosis of lung.

14. Lustgarten bacillus of syphilis. Gumma. Syphilitic pneumonia. Endarteritis.

15. Infectious granuloma. Fibroma kidney. Glioma of eye. Rhabdo-myoma of kidney.

At this point the oxygen gas in the cylinder gave out and Dr. Van Cott was obliged to conclude his paper without illustrations.

The doctor was complimented on the results he had obtained in the copy of the plates, and thanked for the kindness he demonstrated in permitting the society to have this private view together with the very complete, interesting and instructive description of the plates.

A few remarks of a complimentary nature were then made by Dr. Wilson, and by the chair.

The next order of business was the reading of a paper by Dr. A. S. Heath on "The Relation of Tuberculosis of our Domestic Animals to the Public Health, with Specimens." Dr. Heath said as the hour was late, he should prefer to have his paper considered at the next meeting, and it was voted to invite Dr. Heath to read at the May meeting. Carried.

Dr. Belcher then presented four specimens of morbid material, as follows: 1. Carcinoma of the rectum, from a female, æt. 41 years, who had been suffering for years with hæmorrhoids, and who, during the past five months has had difficult and painful defecation, with some discharge from the anus. Specimen consists of the anus, and the rectum for a distance of 10 cm. The dorsal wall of the rectum is covered with an irregular growth slightly raised above the surrounding mucous membrane. The surface of the new growth is covered with fine papillomatous masses, and gross-section shows that the underlying tissue is gelatinous in character. There are extensive infiltration and induration of the surrounding tissues. Under the microscope, the sections consist of tubules lined by cylindrical epithelium, enclosed within a somewhat extensive fibrous stroma. There is also a general lawless condition of the epithelial structures as regards their growth into the submucosa. There is general inflammatory infiltration into the surrounding tissues. There is colloid degeneration of the material.

2. Carcinoma of the tongue, from a female. A rapidly growing tumor on the tongue which had been removed and had recurred very soon thereafter. Examination reveals a small tumor on the side of the tongue, not sensitive to pressure.

The specimen consists of a portion of the tongue taken from the left side of the organ. It is somewhat diamond shaped, and is 6 cm. long, 3.5 cm. wide, and involves the entire thickness of the organ. On the left side, near the cephalo-lateral border is a circumscribed nodule raised 2 mm. above the surface. The median line of the tongue corresponds closely with the dextral border of the specimen. Sections of the material under the microscope show an outgrowth from the epithelial surface of the tongue, presenting the structure of carcinoma.

3. Carcinoma of the superior maxilla. Patient male, æt. 44. March 21.

Three months ago a small swelling was noticed on the right side of the nose. At the same time a small tumor appeared in the roof of the mouth. Both have increased in size up to the present time. Breathing obstructed through the right nostril, and there is some interference with speech. Tumor on nose is solid and attached to the bone. Skin red. Tumor in mouth covers the area over hard palate and fills up the cavity on a level with the gums. Semi-solid in consistence, not tender.

Specimen consists of the entire right maxilla, and the left maxilla as far as the second left bicuspid. The right malar bone is also attached. The free margin of the soft palate forms the posterior boundary. The right nasal cavity and right antrum are filled with a firm, solid mass of new growth. The tumor mass reaches to the soft palate and forms a rounded tumor filling all the spaces within the alveolar processes and projecting into the oral cavity. Under the microscope this growth presents the typical picture of scirrhous carcinoma.

4. Acute general tuberculosis. Male, about 40, who was brought to the hospital in the ambulance with no previous history. Patient Italian and can speak no English. While in hospital gave symptoms and signs of pulmonary consolidation more or less complete with high temperature, general loss of flesh and strength and died one week after admission. Post-mortem examination revealed a condition of general tuberculosis, involving nearly all the tissues of the body. The specimen presented consists of the small intestine at and just above and below the ileo-cæcal junction. In the right iliac fossa, in the region of the ileo-cæcal valve the intestine is closely adherent to the abdominal wall, and in this region there is a large, firm nodulated mass. This mass is found to completely encircle the gut in this situation, and also to present a prolongation at right angles to the gut, which on section shows a number of lymph glands that are the seat of extensive infiltration. This mass of gland measures $3 \times 1 \times 1^1/_2$ inches. The small intestine at the sight of the ileo-cæcal valve is the seat of extensive thickening of its walls with necrotic destruction of the mucous surface. There is a marked obstruction at the ileo-cæcal valve by a deposit of this new material. Two inches above the ileo-cæcal valve in the small intestine is an oval area of necrotic tissue. This area is the size of a silver dollar. There is complete destruction of all the intestinal coats, through to the peritoneal cavity. The mucous membrane of the upper portion of the small intestine also presents a few areas of ulceration, small in size and of ovoidal outline. These areas of ulceration are simply down to the submucosa, except in one situation about the middle of the ileum, where there is an area of complete destruction the size of a fifty-cent piece. The edges of this area of ulceration are thickened and present a necrotic appearance. These ulcers are found throughout the intestines in varying size and depth. The various organs are found to contain tubercular deposits. Microscopical examination of the lungs, omentum, intestine, pleura, mesenteric and bronchial glands gave the findings of tuberculosis.

This material was discussed by Dr. Van Cott, after which the Society went into executive session.

Dr. Archibald Murray,
Secretary, Pro tem.

BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

Meeting of November 10, 1893.

The President, Dr. Sherwell, in the chair.

1. Dr. Morton again presented the case of verrucous eczema shown first at the February meeting. In April he showed it to demonstrate the effect of treatment which had consisted of curetting and the application of salicylic acid plaster, The case was now presented as one of relapsing eczema verrucosa. Dr. Sherwell repeated his opinion expressed at the February meeting. He was still inclined to think it was a case of tuberculosis verrucosa cutis, and said that this form of cutaneous tuberculosis was more frequently met with in older people while lupus occured in young people. Just why it was so he was not prepared to say. Dr. Winfield considered this an important point in diagnosis and also spoke of the microscopical findings in the two diseases. In lupus there being a preponderance of small cells and but very few tubercle bacilli, while in tuberculosis verrucoso cutis the large or giant cells were more numerous and bacilli are in about the same amount as in lupus.

2. Dr. Morton presented a case of Raynaud's disease. J. R., age thirty-six, acquired syphilis fifteen years ago. After three months' treatment all manifestations of the disease subsided to remain absent until five years ago when he noticed that his fingers and hands became cold and blue, the blue color becoming much darker at times, especially noticeable in winter. The left hand was much colder than the right. The nails were dry, brittle, split and eroded. The epidermis at the ends of the fingers desquamated. Neither aneurism nor valvular disease was found on physical examination ; embolus therefore being excluded. During discussion Dr. Morton said: The essential pathological element of Raynaud's disease is narrowing of the lumen going on in some cases to complete obliteration of the terminal arterioles of the extremities. In ten of Raynaud's cases the condition was due to spasmodic contraction of the muscular fibers of the vessels', walls. Changes due to syphilitic endarteritis and also those accompanying chronic interstitial nephritis have a similar effect in diminishing the calibre of the vessels. In the case presented, Dr. Morton thought that there was chronic sphilitic endarteritis, and the repeated attacks of local syncope were due to spasmodic contraction or narrowing of the vessels' walls. If the calibre of the artery did

not change in diameter at times the circulation would be maintained at the same plane, and alteration in the color from blue to purple would not occur. The prognosis is better when the cause is syphilitic than if it is from other degenerations of the arterial (vessels) walls. The treatment proposed in this case is mixed treatment.

Dr. Sherwell was inclined to consider it a case of syphilitic endarteritis simulating Raynaud's disease. The other members concurred in the opinion expressed by Dr. Morton that it was a case of syphilitic Raynaud disease.

James M. Winfield,
Secretary.

1255 Pacific Street.,
Brooklyn, N. Y.

Meeting of December 8, 1893.

The President, Dr. Sherwell, in the chair.

1. Dr. Sherwell presented a case of fibroma moluscum. Male, age twenty-two. Presented himself at the Eye and Ear Hospital for the relief of a filbert-sized tumor on the left auricle which had existed since the blizzard of 1888. The tumor had begun as a small, hard tubercle which had steadily increased in size until it attained its present proportions. To the touch the growth felt like a cystoma, but on excision it was found to be a fibroma moluscum.

2. Case 2 was presented by Dr. Sherwell as a case of atrophoderm due to traumatic trophneurosis. The patient was a female domestic aged forty-nine. The skin had been in all respects normal until after a fall, in which she struck the back of her head, and from the profound symptoms probably fractured her skull. The patient now appears dull, while before the accident she had been bright and intelligent. Over the extremities there are patches of squamo-erythematous-like eruption and also atrophic spots, some of these following the squamo-erythematous patch and others appearing spontaneously.

3. Dr. Morton presented a case of pityriasis rosea. Male, age thirty-three; occupation, fireman. There are a few circular and oval circumscribed patches on the extremities, about the size of a fifty-cent piece. In discussion Dr. Morton said that the eti ology of this disease was still a subject of much dispute. Kaposi describes an affection under the name of herpes-tonsurans-maculosis which is occasioned by the trichophyton, proven microscopically. The contagiousness of Kaposi's form has been proven by

accidental and intentional inoculations. Gibert, Duhring and Crocker describe a disease in all appearances identical under the name of pityriasis rosea or pityriasis maculata et circinata. In these cases (Gibert's disease) no characteristic parasite has been found and trial inoculations have proven futile. The inference to be drawn is that there are either two diseases, one simple erythematous or else the parasite is feebly viable which will account for its inconstant presence.

Dr. Sherwell did not like the name of pityriasis rosea, but preferred the name adopted by the American dermatologists, pityriasis maculata et circinata. He had seen many cases and did not consider it an essentially contagious disease, nor did he think it so very rare as many dermatologists seemed to consider it. In his opinion it was not a disease of a depraved state of health. His etiological belief was that it was an erythema due to some rheumatoid condition. Dr. Winfield raised the question if there might not be two diseases, one parasitic and the other an erythema, the cases characterized by scales and long continuance of symptoms.

He argued on the line of alopecia areata, which was for a long time considered (and is still a subject of dispute) wholly of neurotic origin.

James M. Winfield, M.D.,
Secretary.

1255 Pacific Street,
Brooklyn, N. Y.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society Building, 356 Bridge Street, on Tuesday evening, April 17, 1894, at 8 o'clock.

The President, Dr. George McNaughton, in the chair.

Dr. W. C. Braislin acting Secretary (in the absence of Dr. Myerle).

The minutes of the March meeting were read, and approved.

The Council reported favorably upon the applications of Drs. Mason L. Smith, N. Y. Univ. 1881, and Dr. James H. Wells, L. I. C. H., 1893, and recommended that they be elected to membership.

The following applications for membership were presented :

Dr. Hiram Elliott, Woodhaven, L. I., Bellevue Hosp. Med. Coll, 1888; proposed by Dr. Francis H. Miller; Dr. W. B. Chase.

Dr. H. Koethe, 732 Flushing Ave., Univ. of Erlangen, 1874; proposed by Dr. J. Fuhs; Dr. Reuben Jeffery.

Dr. Daniel C. Mangan, 95 Park Ave., N. Y. Univ., 1891; proposed by Dr. Albert H. Brundage; Dr. J. H. Hunt.

Dr. Harry W. Lincoln, 113 Hancock Street, L. I. C. H., 1894; proposed by Dr. J. M. Winfield; Dr. William Browning.

Dr. Burnett C. Collins, 1263 Dean Street, L. I. C. H., 1894; proposed by Dr. J. M. Winfield; Dr. Wm. Browning.

The following applicants having been favorably reported upon by Council were declared elected to membership: Drs. Geo. R. Hawley, Wm. Waterworth, Louis C. Ager, E. Frank Marsh, S. H. Benton and J. F. Golding.

A communication from the Medical Society of the State of New York was read and received, stating the conditions of the Merrit H. Cash Prize Fund for the best original essay on a medical or surgical subject.

SCIENTIFIC BUSINESS.

Dr. A. J. C. Skene presented a paper entitled: "Some Defects in Surgery as Practiced and Taught at the Present Time."

Discussed by Drs. Wight, Palmer, Bristow, Van Cott, Chase.

Dr. Francis H. Stuart presented a paper on "Sterilization, with Exhibition of a New Sterilizer."

Discussed by Drs. Skene and Wight.

PRESIDENT'S ADDRESS.

The President delivered his annual address, closing with the following recommendations in regard to the revision of the By-laws:

1. That there be a revision of the By-laws.
2. That sec. 7, chap. 4, and sec. 5, chap. 10, and also chap. 19, regarding the granting of licenses to practice medicine in Kings County, be expunged, as they conflict with the laws of the State of New York.
3. That the By-laws be so modified as to more exactly define the work of the Council as the representative body of the Society.
4. That there shall be the following standing Committees:
    - *a.* On Membership.
    - *b.* Directory for Nurses.
    - *c.* Entertainment and Reception.
5. That all Standing Committees shall be appointed by each incoming President and shall report to the Society at each annual meeting.

6. That there shall be a revision of the Fee-Bill.

On motion of Dr. Wm. Maddren, duly seconded and carried, it was

Resolved, That the excellent recommendations of the President be received, and referred to a Committee of Five, to be appointed by the Chair to report upon same at the earliest possible moment, at the next meeting of the Society if possible.

There being no further business, on motion the meeting adjourned. WM. C. BRAISLIN, M. D.,
Assistant Secretary.

NOTE.—The Committee have reported, and a vote upon the recommendations substantially as above will be taken at the June meeting of the Society. D. MYERLE, *Secretary.*

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PROGRESS IN MEDICINE.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

CARCINOMA UTERI, EARLY TREATMENT.

Kelly (N. Y. Medical Journal): The end in view is two-fold—first, by treating cervices liable to become cancerous and thus prevent the formation of this neoplasm; and, secondly, to detect cancer of the cervix at a sufficiently early date to successfully eradicate the disease.

1. It is the duty of the obstetrician to see each patient at his office from two to three months after her confinement, and there to examine and make a careful record of the condition of the pelvic structures, stating accurately what lesions have been produced by the confinement.

2. Cervical lacerations should be carefully described, noting the position and the depth of the tear and the appearance of the lips. Lacerations require no treatment when the lips are thin, uninfiltrated, and lie together. Thick, infiltrated, and everted lips associated with cervical catarrh call for depletory treatment followed by repair of the laceration.

3. Every woman who has passed thirty-five years of age and has borne a child should have this examination made without delay

by a competent physician, and if the cervical lips do not appear perfectly sound she should be kept under observation and examined at intervals of from six to eight months.

4. Every woman over thirty-five with cervical tear should be examined at least once a year for ten years, or longer, if the appearance of the lacerated area is not perfectly healthy.

5. These rules apply with special force to patients whose family history shows a marked inclination to cancerous diseases.

If these rules are conscientiously observed there is not a shadow of doubt but that thousands of lives would be saved yearly in this country alone by timely interference with a disease so markedly local and accessible in its origin.—*Arch. Gyn. Obstet. Pæd.*, February, 1894.

THE DISORDERS OF THE NERVOUS SYSTEM ASSOCIATED WITH THE CHANGE OF LIFE.

Eliot (Med. and Surg. Reporter) offers the following propositions :

1. At the time of life when the menopause occurs, the various organs of a woman's body are likely to be in a state of depression as regards either their nutrition or functional activity, so that the normal equilibrium of health action may be easily disturbed, and abnormal action, the manifestation of disordered function, may be inaugurated and perpetuated.

2. The cessation of menstruation is an event of great physiological importance, and is perfectly competent to produce grave disturbances of the nervous system if any predisposition to them already exists.

3. The more common disorders of the nervous system occurring under these circumstances are functional in character, and are associated with disturbances of functions of other organs, and especially of the digestive, circulatory, and hæmatopoietic systems.

4. In their treatment attention should first be paid to improving the general nutrition of all the tissues of the body, and restoring each organ to its normal activity.

5. If, after all other organs have resumed the proper performance of their functions, symptoms referable to a disordered condition of the nervous system still persist, recourse must be had to remedies which act directly upon the nervous system, either by improving its nutrition or by modifying and regulating its action.

THE NON-OPERATIVE TREATMENT OF SALPINGO-OVARITIS.

Shoemaker (Journal of Surgery, Gynæcology and Obstetrics, August, 1893) refers to the value of the conservative treatment of inflammatory conditions of the tubes and ovaries. He believes that removal of the appendages should not be advised until other treatment known to be carefully applied has failed. As a guide to prognosis without operation, he mentions the amount of organized adhesions and to some extent the amount of prolapse of the ovaries. Should the appendages be badly adherent and prolapsed, relapses are frequent, and no definite progress toward a real cure can be made, though all soreness be removed by treatment and the patient's condition remain satisfactory. He counsels the removal of diseased organs, where there is no reason to expect pus, in a small proportion of the cases of salpingo-ovaritis. These are cases where adhesions are insurmountable, and there seems to be valid ground for considering the lesion present to be the starting-point of a stubborn relapse. A careful use of iodine, ichthyol, boro-glyceride tampons, and elastic wool packing is indicated before the decision is made.

LIGATURE OF THE UTERINE ARTERIES FOR THE CURE OF MYOMA.

Gottschalk (Centralblatt für Gynäkologie, No. 39, 1893), proceeding on the basis of Kuestner's experience in the treatment of uterine myomata by ligature of the arteries, has performed this operation with most satisfactory results. The vessels were exposed exactly as though a total vaginal extirpation were contemplated, and the bladder was provisionally freed from the uterus in order to fully protect it against wound. Three silk ligatures, including the lower third of the lateral ligaments, were placed on each side. The vaginal wound was closed with catgut suture, and the patients were kept in bed for about eight days. In all, seven cases were treated. Two of these were operated on last July. In these cases sufficient time has not elapsed to judge of ultimate results. Both suffered from profuse hæmorrhage, which ceased a few days after operation. In the remaining five cases intervals of time varying between twenty-one months and four months have elapsed. The myomata were about the size of an apple. In two cases complete cure has resulted, since not only have bleeding and subjective symptoms disappeared, but the most careful search has failed to discover traces of the tumor. In the remaining three cases the myomata have markedly diminished in size and the whole uterus has grown smaller. In two of the cases, both middle-aged, there has been no menstrual flux since operation. In one of these cases violent hæmorrhages had occurred for a period of nine months, in spite of skilful gynæcological intervention. Ligature was performed the 28th of January of this year, the menopause occurred the 13th of March, and at this time both tumors had disappeared and the uterus was about normal in size. The patient regained her former health and has remained completely well.

The author believes that ligature of the uterine vessels should be performed not only for the cure of myoma, but also for the relief of cases of concentric hyperplasia. The operation would also be applicable in those cases of uncontrollable climacteric bleeding which are not ovarian in origin.

OTOLOGY.

BY J. E. SHEPPARD, M.D.,

Adjunct-Professor of Otology, New York Polyclinic, Assistant-Surgeon, Aural Department, Brooklyn Eye and Ear Hospital.

PERCUSSION OF THE MASTOID PROCESS AS AN AID TO DIAGNOSIS OF ITS CONDITION.

O. Koerner and R. von Wild (Frankfort-on-the-Main), Archives of Otology, Vol. xxiii, Nos. 1 and 2, 1894. Translated by S. E. Allen, Cincinnati.

Besides some experiments on the cadaver, Koerner and von Wild report two cases of acute central mastoid caries, in which Lücke's bone percussion rendered good service, owing to the absence of external appearance of mastoid trouble, the lowering of the resonance of the bone making possible an early diagnosis of the trouble and timely operative interference. A metal hammer is used for the percussion. The striking surface is 8 mm. broad, and slightly convex. The handle is 16 cm. long and is made of a thin, tapering piece of whalebone. With such a hammer by pretty forcible, even painful, percussion over normal bone covered by thin skin, a loud, clear, osseous tone can be obtained. The spot to be chosen on the mastoid is (1) below the linea temporalis, (2) above the tendinous insertion of the sterno-mastoid muscle, (3) behind the border of the auricle, which must not be drawn forward, (4) in front of the insertion of the hair. "Comparative percussion of bone of course allows of a conclusion as to the condition of the bone *only* when the soft parts are unaltered." Their summing up is:—(1) By means of Lücke's bone percussion it is possible to recognise a central ostitis of the mastoid at a time when the disease betrays itself by no externally perceptible signs. (2) It is the disease of the bone itself and not the obliteration of its air spaces that alters the resonance.

CONCERNING THE DIAGNOSTIC VALUE OF PERCUSSION OF THE MASTOID PROCESS.

S. Moos (same journal), after testing the method, concludes that only a *positive* result is conclusive, a *negative* result not so. That is, an affection of the mastoid, even a severe one, can exist with no lessening of the resonance.

ON NINE OPERATIONS OF MOBILIZATION OF THE STAPES IN CASES OF OLD DEAFNESS.

Dr. Ch. Goris (Brussels), Revue Internationale de Rhinologie, Otologie and Laryngologie. Vol. iii, No. 24. Nine operations of mobilization of the stapes, performed on ears already practically useless for a long time, form the basis of the following conclusions:—1. The operation, antiseptically performed, is not attended by any danger of suppuration of the tympanic cavity. 2. It has made none of the operated ears worse. 3. It is sometimes successful even in inveterate cases in improving hearing or ameliorating the condition. 4. Thus it is a resource, doubtful it is true, but withal valuable, to which one may have recourse when other means have failed.

THE TREATMENT OF TINNITUS IN AURAL SCLEROSIS.

R. W. Seiss, (Philadelphia), Annals of Ophthalmology and Otology, Vol. iii, No. 1, 1894, writes an article whose purpose is, along with a consideration of some of the otherwise most generally useful measures, "to protest against the performance of painful and dangerous operations on cases in which milder measures will secure equally good results." He recommends, as especially useful forms of tubal medication, oil injections and menthol vapor. A drachm of warm, sterile albolene, alone, or with camphor or menthol, one-half to two grains per ounce, is injected into the tube from a syringe through an ordinary Eustachian catheter, followed by simple air inflation to gently force the oil further up the tube. This process repeated every third or fourth day for a considerable time has given good, and more than temporary, results. Of menthol vaporization used in the Dench vapor generator, or other appropriate apparatus, two or three times a week, with other proper treatment of the naso-pharynx, the writer speaks very highly. Among the means resorted to to directly affect the vascular supply of the tympanum, none has yielded the writer such good results as freezing the mastoid region over the branches of the posterior-auricular and stylo-mastoid arteries. He now uses exclusively the tubes of chloride of ethyl, furnished for dental operations, and freezes superficially the whole surface of the mastoid region, the process to be repeated in a few days if necessary. From this procedure very good results have been obtained.

Of the recently more written about excision of ossicles as a definite curative procedure, the writer says, it must be regarded with grave doubts in sclerotic cases, and should never be performed except as a very last resort, and then must be regarded largely as an experiment. For the relief of catarrhal tinnitus in an *operative* way, Seiss limits himself almost exclusively to mobilization of the ossicles, supplementing the principle of the Siegle masseur by mechanical force, and liberating the ossicles to a greater or less extent, claiming as its advantages, perfect safety, comparative painlessness, and that it can be performed several times upon the same ear without injury. Of the internal use of drugs for this symptom the writer has little good to say.

A CONTRIBUTION TO THE ANTHROPOLOGY OF THE EAR IN CRIMINALS.

Hans Daae (Christiania), Arch. of Otology, Vol. xxii, No, 4, gives as his results, after examining the ears of about 250 criminals, and comparison of these with normal ears, the following:—1. The size of the auricular cartilage, and, 2, the form of the auricular cartilage vary in the same individual with age. 3. The projection of the ear from the head increases with age. 4. The auricular cartilage of Norwegian criminals seem to be smaller than that of normal Germans (Schwalbe's results); and the ear is smallest in Lappish criminals—a lower tribe. 5. The auricular cartilage in criminals stands anthropologically on the same plane as in other individuals, since the morphological index is the same in each; therefore, according to my investigations, there is no type which may be considered the "criminal ear."

MISCELLANEOUS.

HEALTH DEPARTMENT.

BROOKLYN, March 1, 1894.

CIRCULAR OF INFORMATION CONCERNING THE USE OF BACTERIAL CULTURES FOR THE DIAGNOSIS OF DIPHTHERIA.

Recent bacterial investigations have shown that a considerable proportion of the cases of pseudo-membranous and exudative inflammations of the throat and upper air passages, commonly considered as diphtheria, and having the anatomical appearances found in diphtheria, are not true, but false diphtheria. On the other hand, it has been shown that a considerable proportion of the cases which are apparently false diphtheria, prove, on bacterial examination, to be true diphtheria.

While in true diphtheria the mortality is very high, and the danger of transmission to others is great, in false diphtheria the mortality is low, and the danger of infection slight.

The differential diagnosis between true and false diphtheria can be made by bacteriological examination in twelve hours, while without this the differentiation is difficult or impossible.

The Health Department is now prepared to make use of bacterial cultures for diagnosis in all cases of suspected diphtheria occurring in the city, and desires that in every case either the physicians themselves should make the cultures, or should authorize an inspector to make them. They should be made in every suspicious case at the earliest possible moment, for during convalescence the specific organisms often disappear from the throat, and the full benefit of a positive diagnosis is not obtained unless it is made early in the disease.

The cultures are made by gently rubbing a cotton swab against the throat and then drawing it over the surface of the culture medium. When the physician himself desires to make the culture (and this is usually the better plan, for it can be done earlier and is more agreeable to the family), he can obtain, free of cost, a culture tube and swab, and simple directions for their use, at any one of the druggists whose addresses are given below. After the culture is made, the tubes are to be returned to the druggist from whom they were obtained. The tubes will be collected by the Department every day. In cases where the culture has not been made by the attending physician, the medical inspector will make one, unless for any reason the physician requests that none be made when he notifies the Department of the case.

The diagnosis will be ready the following afternoon, and can be obtained by the physician immediately by telephoning to the Laboratory, or when this is not done, he will be notified by mail. Cases which prove to be false iphtheria will not be visited by the Health Department inspectors. Cases, on the other hand, which prove to be true diphtheria, will be subjected to the rules and regulations covering contagious diseases.

The bacilli usually disappear from the throat shortly after the disappearance of the exudate, but later investigations have shown that as long as from three to five weeks may elapse before their entire disappearance. In these cases the patients, although apparently well, are capable of transmitting the disease.

It is important, therefore, in order to be able to decide with certainty the time when a patient is free from contagion, to have second, third and fourth, etc., cultures made at intervals of about four days. This applies only to cases occurring in boarding houses, hotels and tenement houses—not to those in private houses.

The materials for making cultures can be obtained from the following druggists, free of cost :

Heydenreich Bros., 169 Atlantic Avenue.
Adolph Levy, 145 Grand Street.
S. Albert Osborn, 401 Fifth Avenue.
E. J. Ringel, Nostrand and Gates Avenues.
Wm. Muir, Broadway and Gates Avenue.
J. B. Winter, 307 Manhattan Avenue.
H. H. Hoyt, 302 Van Brunt Street.
F. J. Munson, 150 Willoughby Street.
R. C. Werner, 2592 Atlantic Avenue.

All communications on this subject should be addressed to Dr. E. H. Wilson, Chief of the Bureau of Bacteriology, Pathology and Disinfection, Hoagland Laboratory.

By order. Z. Taylor Emery, M.D.,
Commissioner.

NEW YORK STATE MEDICAL ASSOCIATION.

The Fifth District Branch of this association held its tenth annual meeting in Brooklyn, May 22, 1894, the president, J. D.

Rushmore, M.D., in the chair. The following was the programme: President's address on "the prevention of disagreeable and dangerous symptoms produced by ether as a general anæsthetic." Business of the branch. Biographical sketches of the late Dr. W. T. White, by John Shrady, M.D.; Dr. John Young, by C. M. Kittredge, M.D.; Dr. Wm. Govan, by I. D. LeRoy, M.D.; Dr. M. K. Hogan, by Wm. O'Meagher, M.D.; Dr. A. L. Carroll, by E. S. F. Arnold, M.D., J. W. S. Gouley, M.D., G. T. Harrison, M.D., C. A. Leale, M.D., A. Lukens, M.D., Stephen Smith, M.D., J. G. Truax, M.D., W. C. Walser, M.D. Scientific papers on "The Dietetic Treatment of Consumption," by T. J. McGillicuddy, M.D.; "The Treatment of Chronic Oöphoritis by Electricity," by Edward Sanders, M.D., Discussion opened by Dr. L. G. Baldwin, of Brooklyn; report of "A Case of Chronic Peritonitis with Intestinal Fistula, Celiotomy, Enterorrhaphy, Recovery," by Frederick Holme Wiggin, M.D. General discussion of vaccination, opened by Drs. F. A. Jewett, S. E. Jelliffe and H. H. Morton, of Brooklyn.

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NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

A TREATISE ON HEADACHE AND NEURALGIA, INCLUDING SPINAL IRRITATION AND A DISQUISITION ON NORMAL AND MORBID SLEEP. By J. Leonard Corning, M.A., M.D., with an appendix on Eye Strain, a Cause of Headache. By David Webster, M.D. Illustrated. Third edition. New York: E. B. Treat, 1894. Pp. 275. Price $2.75.

To this edition has been added a chapter on the "Localization of the Action of Remedies Upon the Brain." This chapter alone is well worth the price of the book. The method which the author adopts in the treatment of headaches which are not relieved by the use of remedies by the stomach, is to inject the drugs into the nasal cavity and then after ten or fifteen minutes by an ingenious device to compress the jugulars for half an hour or so. This method is based on the principle that medicinal solutions have an increased physiological potency when they are made to linger in the tissues of the brain or other portion of the central nervous system by the aid of artificially induced stasis or partial stasis in the capillaries. Some very striking cases are given illustrative of the advantages of the author's plan of treatment.

A PRACTICAL TREATISE ON NERVOUS EXHAUSTION (Neurasthemia.) By George M. Beard, A.M., M.D., edited with notes and additions by A. D. Rockwell, A.M., M.D. Third edition, enlarged. New York : E. B. Treat, 1894. Pp. 262. Price $2.75.

Dr. Rockwell has, in this edition of Beard's well-known work, added a chapter recapitulating some points in the ætiology and pathology of neurasthemia.

ESSENTIALS OF PRACTICE OF PHARMACY. Arranged in the form of questions and answers, prepared especially for pharmaceutical students. Second edition, revised. By Lucius E. Sayre, Ph.G., Professor of Pharmacy and Materia Medica of the School of Pharmacy of the University of Kansas. Philadelphia : W. B. Saunders, 1894. Pp. 200. Price $1.00.

Saunders' Question Compounds, of which series this is No. 18, have been so well received by students of medicine that we are not surprised that in an attempt to meet the wants of students of pharmacy, a second edition of this little book should be called for. A thorough revision was necessary in order that the text might correspond with the United States Pharmacopœia of 1890. Besides this, important additions have been made, among which are : An Outline of Drug and Plant Analysis, Structural Formulæ of Organic Carbon Compounds Used in Medicine, Pharmaceutical Testing of Inorganic Chemicals, and Problems on Allegation and Specific Gravity. We feel confident that medical students as well as students of pharmacy would derive great profit from a study of these "Essentials."

A PRACTICAL TREATISE ON THE DISEASES OF THE HAIR AND SCALP. By George Thomas Jackson, M.D., Professor of Dermatology Women's Medical College, New York Infirmary ; Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons; Consulting Dermatologist Presbyterian Hospital; Visiting Dermatologist Randall's Island Hospital; Member of the American Dermatological Association, etc. New, revised and enlarged edition. New York : E. B. Treat, 5 Cooper Union, 1894.

This enlarged edition of the former very readable little book by the author is a distinct improvement. It is a work most of which may be read with benefit by the layman as well as the physician. More particularly is this true as to those chapters relating to Physiology and Hygiene of the Scalp and Parts Covered with Hair. The diseases in which the hair is affected are well and clearly gone over, the authorities quoted reliable, and usually grouped in order of importance; it (as, for instance, in consideration of ring-worm of scalp), is often remarkable in some diseases to see by how many different roads (methods) the same end is attained by different dermatologists ; a very pointed moral might be deduced from this, we think, in general medicine.

The subject we found most interesting to the dermatologist proper in this volume was the chapter treating of Alopecia Areata. We believe the author's summing up and conclusions as to the ætiology of that disease are sound and are, as we believe, concurred in by three-fourths of those specially interested in skin affections both here and in Great Britain at least. It is, however, somewhat singular the writer should not refer to Leloir's (of

Lille) writings on this subject while giving the observations of other French authorities. We can recommend the work as an useful one to any medical man wanting the latest condensed information on this special subject. Errata too, are few, among them we notice one that almost corrects itself, under one of the first illustrations, the German word "bett" is printed "beet," it might lead to misinterpretation. The book is a useful one. S. SHERWELL.

TUMORS, INNOCENT AND MALIGNANT; THEIR CLINICAL FEATURES AND APPROPRIATE TREATMENT. By J. Bland Sutton, Assistant Surgeon to the Middlesex Hospital, London, with 250 engravings and nine plates. Philadelphia: Lea Brothers & Co., 1893. Pp. 511. Price $4.50.

Mr. Sutton has succeeded in giving to the profession a most valuable work on tumors; the most valuable contribution, we think, to the literature of this subject which has been made in recent years. He has brought to his aid a thorough knowledge of the development of the body, and has thereby been enabled to explain the origin of many tumors which, without such knowledge, are inexplicable. The tumors which occur in the lower animals have also been pressed into service to elucidate the subject, and many of the illustrations are of this nature. Instead of the details of operation only the principles upon which they are based have been stated. Taken as a whole the book is one without which no pathologist or surgeon can afford to be.

AMERICAN GRIPPE, OR MYXOID ŒDEMA. By Carl Seiler, M.D. Reprint from Transactions of Philadelphia County Medical Society, 1894.

In this paper Dr. Seiler gives a brief history of the disease which he observed first in 1885. He regards the benzoate of sodium as much a specific in this disease as quinine in malarial fever. This remedy, together with alcohol and rest, constitutes the whole treatment. Antipyrin, antifebrin and all other "antis" are worse than useless; he says that "all those patent coal tar remedies are only a cause of death. They act as heart depressors, when the heart is already profoundly depressed by the disease." Quinine is, in his opinion, often a cause of insanity and suicide. For chronic cases he uses buchu, bromides, hyoscine or strychnine according to the indications. He has found special benefit from the water of a spring at Swiftwater near, Pocono, Pa. This is where our former townsman, Dr. Richard Slee, is now practising his profession. The wine of Coca he also regards as useful.

THIRD ANNUAL REPORT OF THE CENTRAL THROAT HOSPITAL AND POLYCLINIC DISPENSARY, BROOKLYN, 1894.

The property of this institution represents nearly $30.000. During 1893, there were treated 780 new cases of diseases of throat and nose, 648 of the eye, 247 of the ear, 472 of heart and lungs, 806 of surgery and diseases of women, and 717 of diseases of children and general medicine, or 3,680 new cases in all, while the revisits were 7,077. Since the opening of the institution three years ago 16,110 new cases have been treated.

A cordial invitation is extended to the medical profession to visit the hospital and inspect the work and equipments. It is located at the junction of Broadway, Howard Avenue and Monroe Street.

JOHN MAYOW, M.D.

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THE

BROOKLYN MEDICAL JOURNAL

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

CHOLERA, ITS ETIOLOGY AND TREATMENT; WITH ESPECIAL REFERENCE TO THE LIGHT THROWN ON THIS SUBJECT BY THE RECENT EPIDEMICS.

BY GEORGE T. KEMP, M.D., PH.D.

Continued from page 428.

§ II.

PATHOLOGY.

In a paper read befere the Pathological Society in October, and published in BROOKLYN MEDICAL JOURNAL for March, I discussed the pathology of cholera in detail.

What we knew of the pathology of cholera then has practically been unmodified by the records of researches which I have consulted since, except that comparatively more stress is being laid on the toxines secreted by the spirilla than on the anhydræmia or any other pathological condition. These toxines have been shown to be particularly responsible for the nephritis and anuria, as this often occurs worst in cases where there is little diarrhœa and no marked anhydræmia, so that it cannot be ascribed to the changes in circulation. The chemistry of the poison absorbed from the intestine is also very interesting, but the subject is too extensive to be taken up here in detail. Suffice it to say, therefore, that the poison is likely of proteid nature, and probably a toxo-peptone. There may be several poisons in the fæces. The number and kind of poisons produçed by the spirillum varies with the material in which it is grown.

With these few general statements, let us pass to the diagnosis, clinical history and treatment.

§ III.

DIAGNOSIS.

Realizing the importance of the role played by the cholera spirillum, and accepting as a working hypothesis (which has every chance of being proven) that it is the prime etiological factor, it is self-evident that a bacteriological examination of the fæces should always be made when practicable, especially at the beginning of an epidemic. If we find the spirillum, we know we have a case which is dangerous to public health, and which is likely to take an unfavorable turn and end fatally. And this is by no means unimportant. If we do not find the spirillum, we shall have to be guided largely by the clinical history and other attendant circumstances as to how to act both as to quarantine and disinfection, and as to treatment.

Many cases that are treated and reported as diarrhœa, dysentery, etc., are really cholera, for there is a great increase in the number of such cases reported during cholera epidemics. Dr. Elisha Harris has expressed the opinion that in 1866, during the cholera epidemic in New York, there may have been 1,200 deaths from cholera reported under a different name. Every case of mild cholera reported as diarrhœa can infect and give a severer case to a susceptible person, just as varioloid can give smallpox; hence the importance of keeping a close watch on every case of diarrhœa during a cholera epidemic.

Rumpf (DMW, 1892, p. 858) states that the first case of cholera in Hamburg during the epidemic of 1892 was that of a man who had been working with a party of eighty, and had drunk freely of Elbe water. Of the group, twelve were found to have suffered from diarrhœa within a day or two after the first man was taken sick. These all recovered—some with medical attention, and some without. Beck and Kossel (DMW, 1892, p. 927) report a case, in Berlin, of a man who thought he had simple diarrhœa, and deposited his fæces all around. He finally collapsed and was taken to the hospital. His fæces were found to be full of the spirilla. Similar cases are referred to by Guttman (BKW, 1892, p. 1063) and by Walter (Idem). Cases like these might easily take part in spreading infection. From a consideration of these facts it is evident that every case of diarrhœa during a cholera epidemic should be treated with all suspicion and precaution. The stools should be disinfected, and the general use of water closets held under surveillance. It is important to remember also that absence of pain does not mean absence of danger.

As the bacteriological diagnosis requires a high degree of specialized work as well as time, which the busy practitioner cannot give, and special apparatus which he does not possess, all such work should be given to a specialist in bacteriology. The city should really assume charge of these doubtful cases, and probably will do so. Not one but several will be required if the work is to be done properly. Even in Germany, where men with such special training abound, the resources were severely taxed by the amount of suspect material to be handled. For interesting observations on practical methods of detecting the Koch spirillum in fæces in the presence of other organisms, see (Heim, CFB, xii, p. 359), (Bujwid, CFB, xii, p. 595), (Dahmen, CFB, xii, p. 620), (Bleisch, ZFH, xiii, p. 37), also an article by Koch (ZFH, xiv, p. 319), which appeared between the time of reading this paper and its going to press.

Considering the uncertainty of positive results from bacteriological or clinical diagnosis, it has been suggested—and the suggestion is by no means to be treated lightly—that the only sure means of clinching the diagnosis, whether bacteriological or clinical, is to bleed the patient, and see whether his blood serum confers immunity on a guinea pig from inoculation with virulent cultures. The subject of preventive inoculation and immunity is most interesting, but we have not time to enter upon it now. It has been pretty well shown that the serum of patients recovered from cholera confers immunity from cholera on guinea pigs, and the test mentioned may be taken quite seriously. The diagnosis being established by bacteriological methods, if possible, the further steps to be taken will be considered in the chapter on treatment.

§ IV.

CLINICAL HISTORY AND PROGNOSTIC SIGNS.

The following schematic form will show at a glance the clinical history.

Premonitory in most cases.	DIARRHŒA.	As a rule painless.
May appear at once without premonitory diarrhoea.	COPIOUS WATERY STOOLS.	Usually comes on at night.
May be stained with blood or bile. The more bile the better the prognosis. Quantity of fæces may be enormous. Control of rectum may be lost.	RICE WATER STOOLS.	Vomiting the rule. With or without nausea. Cramps, most common in feet and legs. Spasmodic jerking.
Asphyctic condition (blue color).	ALGID STAGE.	Washerwoman's skin.
Respiration often dyspnœic.	COLLAPSE (Radial pulse gone. Surface cold.)	Heart beat, rate 120 to 140, weak, but not weak enough to account for loss of pulse; loss of pulse due to vaso-constriction and thickness of the blood.

The muscular power is strong, patients often walking around, voluntarily, up to the moment of death.

Collapse may come on in a few hours or not for several days (counting previous diarrhœa). If the patient does not die, the rule is for a reaction to set in. This reaction is accompanied by marked symptoms. There is a well-defined fever; the fæces become colored. Vomiting may return and is usually green. The kidneys begin to act, and the urine contains casts and albumen and sometimes blood.

Coma at this stage is a very grave symptom. Rumpf says that 90% of such cases end fatally.

Some cases develop low delirium, subsultus, etc., and are then spoken of as typhoid. The name cholera-typhoid is used by some authors as synonymous with reaction fever. Patients may die at any stage of the disease.

In some cases collapse and death may come on in a few hours. These cases are called fulminant or foudroyant.

DEATH.

Death may occur under four different conditions in cholera.

1. *During acute symptoms.* The patient is unable to withstand violence of attack.

2. *By exhaustion.* Acute symptoms diminish or disappear, but patient does not rally.

3. *Relapse.* Reappearance of acute symptoms after their complete or partial disappearance.

4. *From sequelæ.* Including so-called typhoid state which so frequently comes on after the reaction.

The picture just drawn is that of what we may call an average case of cholera. The following facts met with in the literature of the last epidemic are of sufficient interest to be specially mentioned here. One very important observation is that bacteriological findings give no clue to prognosis as shown by Lesage and Macaigne (AIP, 1893, p. 19) who found from an examination of 153 cases :

	Cases	Deaths	Mortality
Spirillum very abundant	20	6	30%
" moderately "	109	48	44%
" present in small numbers	24	8	33⅓%

An interesting observation on the relation of the *color of the stools* to prognosis has been made by Nanu. (Thèse de Paris, 1893. RScM, Vol. 41, p. 578.)

This observer found :

In cases with serous (colorless) rice water stools,				mortality	59.09%
In cases with bilious	"	"	"	"	28.57%
Total number of cases 163				"	36.80%

An important point in prognosis is emphasized by Michael (DMW, 1892, p. 1026) who refers to the readiness with which the radial pulse is lost, and suggests, in all such cases, to feel for the carotid pulse—when this is lost the prognosis is very grave.

Coste (Revue de Méd. vol. x, 1890, p. 12 ; quoted from Sch. Jb, vol. 236, p. 26) says that during collapse if the pupil reacts to light there is hope ; when this reaction is lost, the patient will die, even if other signs appear favorable. He bases this statement upon observations of 127 cases.

Rumpf (DMW, 1892, p. 877) has seen perfect collapse and worst symptoms—cold, pinched skin, anuria, cramps, etc.—when there has been very little diarrhœa and no vomiting. We must remember, therefore, that the toxine and not the anhydræmia, causes the suppression of urine and general systemic disturbance. Bearing these facts in mind, it is evident that if the patient can stand the immediate drain, it is more important to allow elimination of poisons to go on, by the intestine, than to check the diarrhœa. The value of this is made the more apparent, when we have suppression of urine and remember the observation of Pouchet (Quoted from BKW, 1893, p. 278) that the stools of cholera patients contain urea in considerable quantities.

Hüppe gives us this caution (BKW, 1893, p. 161), that for ultimate safety, we should never lose sight of the urine. Cases where urinary secretion remains suppressed, are always in danger of collapse and death, far more so than cases with profuse diarrhœa. Terry, Vas and Gara (BKW. 1893 p. 277) describe the color of the urine, after the algid stage, as usually dark brown, with a tinge of green, reminding one strongly of carbolic acid urine; reaction strongly acid, It is well to bear in mind the condition of the kidney at this stage. E. Fraenkel (DMW, 1893, p. 158) says that the epithelium shows cloudy swelling, even to granular disintegration. The acme is reached on third or fourth day and then continues in this condition for some time. In a series of kidneys, taken at all stages of the disease, Fraenkel finds that this condition of active inflammation may last as long as two weeks. Regarding the relation of the reaction fever to the state of the kidneys, Rumpf (BKW, 1893, p. 412) says: The most frequent sequel is the reaction fever, or cholera-typhoid, as it is often called. In the Hamburg epidemic this was a favorable sign. Somnolence without fever is nearly always prognostic of a fatal ending (according to Rumpf 90%). These phenomena have generally been ascribed to the kidneys, but Rumpf thinks that cholera coma can not be identified with uræmia. He observed that in 20% of the cases the urinary function was not seriously interfered with, and that anuria for several days did not necessarily forebode a fatal ending, but he also noticed that patients made better recovery where the kidneys were not involved, and expressly states that the part played by the kidneys is by no means without importance. Continued diarrhœa without spirilla is not an uncommon sequel of cholera. (Rumpf, BKW, 1893, p. 412.)

§ V.

TREATMENT.

In treating a suspicious case during a cholera epidemic, if there is a history of the patient having eaten green fruit, or anything likely to account for the symptoms, give castor oil or calomel and follow this at the proper time by opium. Dilute mineral acids are good as a drink in this stage whether the case be cholera or cholera morbus. Watch the case closely, as collapse and death have been known to come on without the stools losing color or becoming like rice water. Insist upon absolute rest and careful regulation of diet. This is the most important of all. The patient should lie down between blankets. A flannel bandage over the abdomen is good also. Give no food whatever for about eight hours, then begin cautiously with bland fluids such as egg-water, mucilaginous decoctions, soaked toast, gruel, well boiled rice, etc. Forbid beef tea and all concentrated or stimulating broths, even when made with acid. Watch the diet for several days, and if diarrhœa returns insist upon absolute fasting for a time. For drink give bits of ice, or dilute acids, best in carbonated waters; many prefer hot drinks, tea and coffee being almost universally allowed. Wine, champagne or spirits may be used as a stimulant, bearing in mind that stomachs unused to these stimulants sometimes do not bear them well. For interesting literature on this subject consult Wendt, (A Treatise on Asiatic Cholera, William Wood & Co., N. Y.), Nothnagel & Kahler, (DMW, 1892, p. 796), Rumpf (DMW, 1892, p. 878), Cantani (BKW, 1892, p. 914), and Walter (BKW, 1892, p. 1063). If, during a cholera epidemic, there is no history of any indiscretion of diet to account for a case of diarrhœa, it is a serious question whether we should treat the case with opium, as we probably would do at any other time. The trend of opinion of those whose recent experience has been the largest, is decidedly away from opium, nearly all of them using a treatment by calomel, having tried the two side by side. (See opium and calomel in chapter on drugs.)

We must not forget that until the disease declares itself, we are in the dark as to its nature, for cases of simple diarrhœa occur during cholera epidemics just as at any other time; and, on the other hand, some patients whose fæces swarm with spirilla never show any more severe signs of sickness than a moderate diarrhœa. If the case is one of simple diarrhœa the opium will cure it in the shortest time, and the patient can return to his work. If the case is cholera the opium will likely do no good, and we lose valuable time which may possibly cost the patient his life. The physician is called upon to decide, in each case, the best line to follow, and this decision is by no means always easy to make. Gailliard, of Paris, says that in all his long experience, he has never seen opium do good in cases of undoubted cholera. Cantani uses this as a diagnostic point and says that if the diarrhœa does not yield promptly to opium, acid and alcohol, the case is probably cholera, and he loses no time in adopting more vigorous measures. Rumpf says: "The initial diarrhœa may be treated by opium, but its efficacy is doubtful." He prefers to give the watery extract hypodermically and cautions not to use enough to paralyze the intestines. If there is much restlessness it may be well to follow the suggestion of Macnamara, and give chloroform by inhalation, until sleep is induced (see chloroform). Hot baths and tannin clysters have been recommended for this stage, they will each be considered in their proper place in the chapter on mechanical and surgical treatment.

If the diarrhœa becomes more watery and profuse, and the stools take on the appearance of rice water, we may be reasonably certain that we are dealing with genuine Asiatic cholera.

The old treatment was to continue or even push the opium, and, at the same time, to apply external heat, and hot drinks and stimulants internally, being careful not to push alcoholic stimulants too far. If we would profit by the experience of the greater number of observers during the last epidemic, we would discontinue the opium at this stage, or only use it in hypodermic injections to relieve vomiting and retain a slight influence on the bowels. The one drug which has had more said in its favor, and less said against it by the most recent observers is calomel. This was supposed by many to be beneficial by helping to remove the bacilli from the intestines, and by hampering the growth of those that remained behind. The theory that calomel produces intestinal antisepsis has been disproven by bacteriological examinations, notably those of Canon Lazarus and Pielicke (BKW, 1892, p. 1215). According to these gentlemen, dark-green stools following the administration of calomel were found to be swarming with living spirilla. The same was true in another case, after two grammes of creolin had been taken. Another patient who took six grammes (ʒ jss) of salol as a prophylactic was taken on the third day with cholera and his stools were found to be swarming with spirilla. It is probable that no drug, however administered, will insure intestinal antisepsis, but the fact remains that calomel has been found to be the best drug administered by the mouth, according to the clinical experience of the largest number of observers, although the results even with it are none too flattering. (See calomel.) Other drugs have been mentioned by various authors as especially useful in cholera, mostly for intestinal antisepsis. Among these may be mentioned benzo-naphthol, bismuth preparations, chlorine water, chloroform, creoline, creosote, salol and tribromphenol; each of these will be discussed under the alphabetical list of drugs. If clysters of tannic acid have not been tried before they should be employed at this stage, as it is in the earlier stages of cholera rather than in collapse that they accomplish the most good. The whole subject of medication *per anum* will be considered later in the chapter on mechanical and surgical treatment. It is during the stage of copious watery stools, or rice-water stools, that vomiting is apt to be a troublesome symptom, so much so that it demands special attention. In the first place, the vomiting may be unaccompanied by nausea, and some clinicians advise disregarding it. Some say it is positively beneficial, and is an effort of nature to rid the system of poisonous material. There is no doubt that considerable liquid is secreted by the stomach, from the blood, for the vomit, in cases where the free use of liquids was forbidden, has been greater than the amount of fluid taken in. It has been shown by chemical analysis that the vomit may contain urea, and what other effete substances may be gotten rid of in this way is not known. Heyse (BKW 1893, p, 20), advises combating vomiting, saying that it weakens the patient. This point may be watched, however, and if the vomiting is easy it is good practice to leave it alone. If it exhausts the patient then try to stop it. The drink should be carefully regulated from the beginning, cracked ice and carbonated water, with or without a little acid, being the only actual drink allowed. This should be given plentifully, but not too much at a time. Champagne is recommended also. Rumpf has found that on putting the patient on calomel, the vomiting often ceases without further treatment. Resorcin has been highly praised by Feilchenfeld, who thinks it the best remedy we have for the vomiting of cholera. (See resorcin.) The two drugs, however, which are most recommended for checking the vomiting are chloroform and cocaine. (See chapter on drugs.)

For persistent vomiting Harkins (Sch Jb, Vol. 236, p. 237) recommends a blister under the ear with liquor epipasticus, B.P.

He has found from experience in England and in Malta that such a blister stops vomiting, whether the case be cholera morbus or true cholera. He gives some theoretical discussions which hardly demand attention in the light of our present knowledge, but his clinical observation is quoted for what it is worth. Unfortunately no statistics are given.

Another symptom frequently demanding treatment at this stage is cramps. These are most frequent in the feet and legs and are sometimes very severe. Various measures have been suggested for their relief, but none appear to be better, in ordinary cases, than the application of external heat. Hot baths are also recommended and will be discussed under mechanical measures of treatment. If further measures are necessary, friction with hot cloths may be tried, though the bulk of opinion seems to be against this. Maclean recommends chloroform stupes to the epigastrium, the whole to be covered with oil silk. A hypodermic of morphine, or the inhalation of chloroform, at the same time keeping up external heat, is the most convenient method of meeting severe cases.

The one condition, above all others, for which the physician is on the lookout with most anxiety is collapse. This usually comes on after some hours, at least, of watery diarrhœa, but it may supervene within a few hours (foudroyant cases), or may even appear without any previous diarrhœa (cholera sicca). The severity of the attack in this respect varies in different epidemics, and at different times in the same epidemic, being, as a rule, the more severe toward the beginning than at the end. This was very noticeable in the last epidemic in Hamburg. The number of *foudroyant* cases was very large, one-third of all cases dying in the acute stage. Two-thirds of all the deaths occurred in the first two days of the sickness. If the skin begins to become blue and cold, push external heat vigorously. This may be done in various ways, Hot water bottles and hot brick are nearly always available. Peters suggests wrapping lumps of quick-lime in wet cloths and placing them in bowls and basins under the bed clothes. The slaking of the lime produces heat and moisture. Packs of hot blankets, wrung out in water or mustard water, may be applied. These were tried by Eisenlohr (DMW, 1892, 1004), who says that he "has nothing special to say in their praise." Cantani also has abandoned them. Rumpf (DMW, 1892, p. 878), prefers hot baths to either moist or dry heat. Zippel (DMW, 1892, p. 956), and Walter (BKW, 1892, p. 1064) used the method of conducting the heat from a spirit lamp to the patient, under the bed clothes, by a bent pipe. They put segments of barrel hoops over the patient and blankets over the hoops, and conduct the heat into the arched space between the blankets. They praise this arrangement very highly. The same principle was employed by Wilcox (Am. Journ. Med. Sc. 1893, p. 62) at Swinburne Island. He built a tent with a blanket from the steam heater to the bed. These methods have the advantage of not disturbing the patient, and they can be used quite well with the subcutaneous or intra-venous method of injecting fluids, without disarranging anything. During threatened collapse hot spirits and hot tea and coffee may be given by the mouth, as also camphor, and caffeine, ether and camphor may be given hypodermically. The latter is best given dissolved in almond oil, 1 to 9. Cantani's treatment by clysters of hot solutions of tannin may be employed in the face of impending collapse, but it certainly seems more rational to follow the advice of Samuel, and not delay too long in employing subcutaneous injection, or intravenous, if that is thought necessary. This can be done so easily, while applying hot air under the blankets, that delay could hardly be excused. If collapse has fairly set in, stop all strong medicines by the mouth. Absorption is practically at a standstill, and death has resulted from pushing poisonous remedies at this stage. The poisons simply lie undissolved in the stomach until the reaction sets in, and then they are all absorbed at once. The patient should be given plenty of liquid in this stage, carbonated water ad. lib., or better, hot weak tea, and spirits. The physician may be guided somewhat by the taste of the patient whether to give hot drinks or cool effervescent drinks. Nothnagel and Kahler (DMW, 1892, p. 797) recommend 10-20 drops of ether in heavy wines as stimulant, also camphor dissolved in almond oil, 1 to 9, hypodermically. Rumpf advocates the use of camphor hypodermically; Guttman both camphor and ether;and Giacich uses ether one-tenth without camphor. Caffeine hypodermically is highly praised as a stimulant by Heyse (BKW, 1893, p. 20) and by Kutner (DMW, 1892, p. 797). The latter uses the double salicylate of sodium and caffeine. Hospitals Beaujon, Trente-six and Necker all endorse it. The treatment of collapse at present consists principally of mechanical procedures. These are hot baths, injections per anum, subcutaneous injections, intra-venous injections, intra-arterial injections, intra-peritoneal injections and laparotomy. They will all be considered in a separate chapter on mechanical and surgical methods of treatment, but a few words in advance may be said to advantage here, while a discussion of the other lines of treatment is fresh in our minds.

Saline transfusion by the subcutaneous or by the intra-venous method has received more general support than any other treatment proposed, and, taking into consideration the pathology of the disease; it seems the most rational. After we have recognized a case to be cholera, and have tried by mouth remedies, such as calomel, or by properly applied tannin clysters, to hinder the growth of the spirilla and aid in the elimination of the toxines, if we find, in spite of our efforts, that the patient is drifting towards collapse, the best thing to do is to let the watery stools go on; clinical experience has shown that those cases in which the stools are most abundant are not the worst. Then by supplying water, to make up for the drain on the blood, we aid in the elimination of these poisons by the intestines, the poisons themselves acting as a hydragogue cathartic. External heat is a very essential factor, and should never be forgotten; not only does it prevent loss of bodily heat, but all we can do to make the skin active as long as possible, takes that much strain off the kidneys, which are sadly disorganized. All other indications should be met *pro re nata*.

If the patient does not die in collapse we have, as a rule, the reaction fever and convalescence. There is no specific treatment to be laid down here. The system is recovering from the shock it has passed through, and indications must be met as they arise. It is well to bear in mind that the kidney is the weak point, and that we have an acute condition to deal with about as serious as a case of acute Bright's disease. Hirschfeld (BKW, 1892, p. 973) made a careful study of the urine of patients who came through collapse. He found that in some cases the urinary secretion was not re-established. In others the patients passed 300 to 600 c.c. of a brownish cloudy urine containing .2 to .3% albumen. The microscope showed granular casts and epithelium. The amount of nitrogen excreted was very small, about 2 grammes nitrogen or 4 grammes of urea being secreted daily. This is far below the hunger-figure, and shows that the kidney can not get rid of the nitrogenous waste of the body, to say nothing of the food. Seldom in Bright's disease do we have such a bad state of affairs as this. The symptoms, too, at this stage are strikingly like those of uræmia.

(To be continued.)

CONTAGION IN TUBERCULOSIS.

BY GEORGE A. EVANS, M.D.

Read before the Medical Society of the County of Kings, February 20, 1894.

In order to emphasize more forcibly the necessity of adopting active measures to limit the prevalence of tuberculosis in this city, it may not be amiss at this time to lay before the Society a brief compilation of data upon which your "Committee on Tuberculosis" largely based its recommendations.

This occasion also affords an opportunity to say that your committee followed somewhat in the footsteps of Dr. Herman M. Biggs, in his report on the subject to the New York City Board of Health.

In 1891, Dr. George H. F. Nuttall, of the Johns Hopkins University, reported his observations on the numbers of bacilli in the sputum in three cases of pulmonary tuberculosis undergoing the Koch treatment; these observations were made every few days. In the first case the patient expectorated 2,000,000,000 bacilli during the twenty-four hours. After the patient was inoculated with tuberculin the number rose to between 3,000,000,000 and 4,000,000,000. After the inoculations ceased the number fell to what it had been originally. In the second case, the number of bacilli varied between 20,000,000 and 165,000,000 on the days preceding the Koch inoculations, while the third case varied between 70,000,000 and 12,000,000 before the inoculations. In another case, not undergoing the Koch treatment, the number of bacilli varied between 300,000,000 and 4,000,000,000. The accuracy of Nuttall's method of computation was demonstrated by a number of test and culture experiments.

According to Böllinger, one cubic centimetre of phthisical sputum contains from 810,000 to 960,000 tubercle bacilli. The average consumptive, therefore, expectorates between thirty and forty millions of these parasites a day.

In a series of experiments of investigations made by Dr. T. Mitchell Prudden, of New York, in 1891, as many as 21,460,000 tubercle bacilli were computed to be present in the daily sputum of a single patient. From data taken from the vital statistics report of the last census of the United States, it is safe to assume that the whole number of deaths due to pulmonary phthisis in the entire country during the year 1890, was over one hundred and twenty-five thousand. If we estimate the average duration of the disease as two years, there would be two cases in existence for every death. In this way we estimate 11,000 cases in existence in New York City, 4,000 in Brooklyn, and 13,000 in the rest of New York State.

Most of these phthisical subjects eject for months large quantities of sputa, containing immense numbers of spore-bearing tubercle-bacilli. "Most of these countless infective germs (to quote Robert Koch) which are scattered everywhere, on the floor, on articles of clothing, etc., perish without finding an opportunity of settling again in a living host, but we should further bear in mind the results of Fischer's and Schill's experiments, which demonstrate that tubercle-bacilli may retain their virulence for 43 days in putrefying sputum, and for 186 days in sputum dried at the ordinary temperature of the air." It has also been shown by Sawizky, that tuberculous sputum, dried and preserved under the conditions which usually obtain in the dwelling-house, preserves its infective properties for two months, while the experiments of Stone go to show that the virulence of these parasites may be extended for as long a period as three years. Koch says, "There can be no doubt as to the manner in which the tubercular virus is carried from phthisical to healthy subjects." By the force of the patient's cough, particles of tenacious sputum are dislodged, discharged into the air, and so scattered. "Now, numerous experiments have shown that the inhalation of scattered particles of phthisical sputum causes tuberculosis with absolute certainty, not only in animals easily susceptible to the disease, but in those also which have much more power of resisting it." Koch goes on to state, that while a healthy person who is brought into immediate contact with a phthisical patient and inhaling the fragments of fresh sputum discharged into the air may be thereby infected, inhaling dried sputum in the form of dust is much more likely to set up tuberculosis.

Schirner, of Vienna, reports in the "Wiener Medizinische Presse," January 4, 1891, that one day in 1888, on rinsing the dust from some grapes bought on a warm day, late in summer, he found the water quite dirty, and struck by the thought of the large number of phthisical patients who eject their sputa upon the streets he injected ten cubic centimetres of this into the abdominal cavity of each of three guinea pigs. One of the animals died in two days, of peritonitis. The other two died in forty-five and fifty-eight days respectively.

Examination of the bodies disclosed extensive tuberculous infiltration at the site of inoculation, and partly caseous nodules in the peritoneum, in the liver, in the spleen, but with meagre deposits in the lungs. Tubercle bacilli were found in the nodules.

In a communication made to the Académie des Sciences, by MM. Spillman and Haushalter, and recorded in "La Semaine Médicale," the question of the spread of the tubercle-bacillus by means of the common house fly is considered. The authors state that they have seen flies enter spittoons containing the sputum of phthisical patients; they were then caught and placed in a bell-jar. On the following day several of them were dead. Examination of the abdominal contents and excrement of these flies on the inside of the jar showed the presence of many tubercle-bacilli.

Cornet's experiments, which were published in the "International Klinische Rundschau," demonstrate beyond doubt the infective nature of dust removed from the walls of rooms in dwellings and from those of hospital wards in which tuberculous subjects have lived. In order to examine the walls and floors of rooms, the surfaces were washed over with sterilized sponges, which were then used to inoculate broth, the resulting culture being injected into the abdominal walls of three guinea-pigs. The animals were killed forty days later and a careful necropsy made. Twenty-one hospital wards, in which most of the patients were phthisical, were examined in this way, the result being that from the dust of fifteen of them, tuberculosis was set up.

Similar observations made in lunatic asylums showed that the walls of these establishments are very frequently infected with tubercle. Private houses, where persons affected with phthisis had lived, gave likewise very distinct, positive results. The investigations of Flick in Philadelphia, as well as those of DeForest in New Haven, which were made to determine the infective or non-infective nature of the atmosphere of rooms in which tuberculous subjects had lived, were also conclusively affirmative.

Marfan, of Paris (Semaine Medicale), reports the following details of a localized epidemic of pulmonary phthisis, in which the element of infection seems to have played a very important part:

"In a large business house in the centre of Paris, twenty-two persons were employed about eight hours a day. One of them, aged forty, had been phthisical for three years, when he died. He coughed and spat upon the floor for three years and did not leave his work till three months before his death. From this time, out of twenty-two persons employed, fifteen have died. One only died of cancer, the remaining fourteen died of pulmonary tuberculosis. One year before the death of the first person, who appears to have been the starting point of the epidemic, two employees who had been connected with the same business for more than ten years, began to cough and spit upon the floor. They died in 1885. Beginning with the end of 1884, the deaths followed each other at close intervals."

At the meeting of the congress for the study of tuberculosis which was held in Paris, in 1888, a permanent committee was appointed to formulate simple and practical instructions regarding the prophylaxis of tuberculosis. On behalf of this committee, Villemin submitted a report which received the approval of four professors of the medical faculty of Paris, of which the following is a brief summary:

1. Tuberculosis is, of all diseases, the one which has the largest number of victims in the cities, and even in certain country districts. In 1884, for instance, of 57,970 deaths in Paris, 15,000 were due to tuberculosis.

2. Tuberculosis is a virulent, contagious, transmissible parasitic disease produced by a microbe, the bacillus of Koch. This microbe, apart from direct hereditary transmission, finds its way into the organism through the digestive and respiratory tracts, and through wounds of the skin and mucous membrane. The propagation of tuberculosis may be prevented by well-directed precautions.

3. The parasite of tuberculosis may be found in the milk, muscles and blood of the food animals. The use of raw and underdone meat, and blood that may possibly contain the living germ of tuberculosis, should be prohibited. Milk, for the same reasons, should be boiled before being used.

4. On account of the dangers concealed in milk, the protection of infants, who are so easily attacked by tuberculosis, should attract the special attention of mothers and nurses. The tuberculous mother should not nurse her child. Cow's milk, when given, should always be boiled. There is less danger in giving ass's and goat's milk unboiled.

5. It is greatly to the interest of the public to assure the proper inspection of meat, as provided for by law. The only sure way to avoid the dangers of tubercular meat is to see that it is *thoroughly* cooked.

6. Inasmuch as the germ of tuberculosis may be conveyed from a tubercular to a healthy man by the sputum, pus, inspissated

mucus and any object containing tubercular dust, it is necessary to bear in mind that:

a. The sputum of phthisical persons being the most dangerous agent of transmission, there is a public danger from its presence upon the ground, carpet, hangings, curtains, napkins, handkerchiefs, cloths and bedding.

b. The use of cuspidors by everyone should be insisted upon in all places. Cuspidors should always be emptied into the fire and cleansed by boiling water. They should never be emptied into rubbish piles, upon gardens, or where there is a possibility of infecting poultry, or even into water-closets.

c. It is unsafe to sleep in the bed of a tuberculous patient, or to spend a great amount of time in the room of such a patient; least of all should young children be allowed to sleep in such a room.

d. Individuals considered as predisposed to contract tuberculosis should be kept away from localities frequented by phthisical patients.

e. One should not use objects contaminated by phthisis (linen, bedding, clothing, toilet articles, jewelry, hangings, furniture, playthings, etc.) except after suitable disinfection.

f. Rooms and houses occupied at watering places and resorts should be furnished in such manner that disinfection may be easily carried out after the departure of each invalid. It is the best plan of all to furnish rooms without curtains, carpets or hangings, to whitewash the walls and cover the floors with linoleum."

GENERAL OBSERVATIONS UPON SURGICAL TUBERCULOSIS.

BY GEORGE RYERSON FOWLER, M.D.,
Surgeon to St. Mary's Hospital, and to The Methodist Episcopal Hospital, Brooklyn.

A portion of the discussion upon Tuberculosis before the Medical Society of the County of Kings, February 20, 1894.

For centuries most of the chronic or granulating inflammatory affections of the skin, lymphatics, bones and joints have been grouped together under the general term *scrofula.* It has likewise been a matter of general observation that many of those persons suffering from these affections, either during the course of the local affection, or subsequently to the apparent recovery, perish from general tuberculosis. There can be no doubt that these diseases, heretofore regarded as strumous or scrofulous in their origin, or the product of a chronic inflammation following an injury, depend for their existence upon a specific bacterium, whose presence can usually be demonstrated. The affected tissues can likewise be shown to be histologically identical with those found in pulmonary or other well-known and generally recognized forms of tuberculosis. Bayle, as early as 1810, and Lænnec demonstrated the presence of circumscribed inflammatory new-formation tissue having a marked tendency to caseation in the lungs of persons suffering from phthisis. As a result of this, surgeons were early led to attribute to tubercle all chronic inflammatory conditions ending in caseation. Bayle attributed to the presence of tubercle, inflammation and caseation of the lymph glands. The so-called tuberculization was thought to be the changes which scrofulous glands, the seat of chronic inflammation, underwent. The same process was supposed to go on in bones and joints, the skin, etc. Cold abscesses, the pus of which also undergoes dessication, and inflammatory exudations, the fluid portions of which were absorbed, were also included in this category.

The first anatomical demonstration of the identity of the process in the lining membrane of the joints in cases of "tumor albus" or "white swelling," as these chronic diseases were then called, and the tubercular lesions as they were found in the lungs, was furnished by Rokitansky (1844), although Nélaton had previously applied the discovery of Lænnec to the osseous structure and announced that tubercle may appear as a circumscribed or diffused lesion. Virchow, later on, pointed out that in the most intractable joint lesion, the disease is caused by miliary tuberculosis of the synovial membrane; he likewise first conceived tubercle to be a new formation—a growth *sui generis*. He taught that fresh tubercle consists of very perishable young round cells, showing usually a clear nucleus. The observations of Virchow rather tended, however, to antagonize the theory that the two diseases, scrofula and tubercle, were essentially dependent upon the same process. The view was still held by some of an etiological connection between the two diseases, but became more difficult of proof. Villemin (1865–1869) made some inoculation experiments, crude in character, to be sure, but which pointed nevertheless strongly toward the infectiousness of tubercle. Since that time many attempts have been made to discover and isolate a specific micro-organism which should be characteristic of the disease. These efforts were partly due to the assertion made by v. Buhl (1859) that the cheesy foci, which had been observed by many earlier investigators, were the real cause of the dissemination of tubercle. Villemin's efforts to prove this by inocculating the tuberculous material were followed in 1869 by Koster's researches. This observer furnished the most convincing proof that miliary tubercles exist in every joint the site of a fungous or granulating inflammation, and at the same time discovered and described the giant cells, which have been until recently regarded as the essential and pathognomonic histological element of tubercle. At the same time Schnuepfel demonstrated the presence of miliary tubercle in lymph glands in which the process of caseation was going on, while Friedlander showed its presence in lupus.

The efforts to identify scrofula and tuberculosis as one and the same affection, and to find a common and constant anatomical and histological groundwork upon which to base their identity, stimulated many observers to increased effort. It was soon found, however, so far as the giant cell was concerned for which so much had been hoped in the elucidation of the problem (Langhaus, Wagner, and others), that this peculiar structure existed under physiological as well as pathological conditions. It was likewise found that even the supposed characteristic giant cell with peripheral nuclei was sometimes absent. Discussion served to increase the uncertainty, and this was not lessened when Villemin's experiments were followed, substituting for the supposed tuberculous matter such indifferent substances as small pieces of paper, bits of tissue, etc. These were placed in the abdominal cavity of rabbits and guinea pigs, and it was observed that around these foreign bodies cellular elements congregated which were strikingly like miliary tubercle in their histological structure. Even the giant cell was demonstrated to exist under these conditions. Although there was ample opportunity for error in these experiments, as for instance the possibility of infection of a tuberculous nature taking place unwittingly, and the fact that these animals are peculiarly susceptible to tuberculosis, yet the doubt was raised, whether or not either the giant cell or the miliary tubercle was really the essential and characteristic structure which it had been heretofore considered. These doubts were increased, until they amounted to a certainty, by the work of Julius Arnold, Baumgarten and others, who demonstrated that tubercle consisted of only circumscribed infiltration of small cells, the result of irritation of the tissues. Migrating leucocytes and fixed connective-tissue cells take part in the proliferating process which occurs at the site of the tubercle, as well as epithelial and endothelial structures. Therefore, while all of these are found under conditions other than those which go to make up the presence of tubercle, yet there was an essential and peculiar difference between the behavior of these little inflammatory masses and ordinary inflammation. These differences related chiefly, so far as these researches proved, to the occurrence of a rapid degenerative process which, from the resemblance of its products to soft cheese, was known as the *cheesy degeneration*, or caseation. And it was likewise demonstrated that this characteristic change in the cellular accumulation is common to scrofulous lymph glands as well as in the disseminated nodules of miliary tuberculosis, and in the foci of the ends of the long bones in tuberculous disease of the joints. In consequence of these facts the old name of scrofula was abandoned, and the terms *local* and *general* tuberculosis substituted, these being applied as the process is restricted or diffused in the body.

The question now naturally arises as to whether these inflammatory conditions with well-marked peculiarities were due to a specific infecting agent, or to a special condition of the tissues. In spite of those who, in opposition to Villemin's experiments, sought to disprove that there existed a positive and specific cause for the disease, the results of inoculations supported this view. The constancy of the results which followed inoculation, suggested, on the basis of what was already known of inoculable diseases such as syphilis, variola, glanders, anthrax, etc., the presence of some special infection, as the most reasonable explanation of what otherwise was inexplicable.

All efforts seemed at last concentrated toward the isolation of this specific agent. Hueter and Schüller (1880) were almost simultaneously engaged in the attempt to demonstrate a microbic origin to tuberculosis. Theories were advanced and discussed, microbes which were thought to be etiological factors were found and described, but it was reserved for the master mind of bacteriology, the father of the science, Robert Koch (1882), to clear up the mystery by the announcement of the discovery of the *bacillus of tuberculosis*. The morphological demonstration of the true micro-organism was made only after prolonged and convincing trials by means of the most exact methods of technique ever employed in scientific investigation. The employment of isolated or pure cultures on sterilized blood serum, and the method of coloring these by means of methylin-blue, furnished the means of demonstrating the presence of the bacillus tuberculosis in the sputa, the pus, and portions of tissue taken from tuberculous foci in the lungs.

Koch's introduction of trustworthy methods of identification and cultivation of the bacillus tuberculosis stimulated investigation still further, and it was soon found that these peculiar organisms were present in a great number of diseases which were formerly classed among the scrofulous affections. In diseases of the bones an . joints, the lymphatic glands, sheaths of tendons, the testicles, scrofulous ulceration of the skin, cases of lupus, in the granulations and pus of chronic abscesses, in the tongue, and more recently in the urethra—in fact, wherever granulating inflammation, with or without cheesy degeneration, took place, there the bacillus tuberculosis has been found. The discovery of Koch led to the histological confirmation of what clinical observation and inoculation experiments had stamped as more than probable.

The manner in which the bacillus finds entrance into the body is of interest to the surgeon. It is more than probable that this occurs by contagion, and not by heredity, as was formerly supposed. This is supported both by clinical facts, as well as by inoculation experiments. The older physicians were quite familiar with instances in which those in direct contact or in more or less constant attendance upon tuberculous patients subsequently showed evidences of the presence of the disease. But in all probability the disease is conveyed, in most instances, through the medium of the atmospheric air, not so much so, however, by the air actually exhaled by patients suffering with pulmonary tuberculosis as has been supposed, since this air has been shown to be sterile. A patient, under these circumstances, by a violent coughing effort might actually force bacilli by means of the breath into the surrounding air. The danger, however, is particularly to be apprehended from ill-ventilated rooms, the air of which is charged with bacilli and spores arising from dried sputa or suppurative cheesy masses. Experiments have been made which prove that the dusty residua of sputa from tuberculous patients, when inhaled by animals, gives rise to the disease. It is not always easy to demonstrate the presence of the bacilli and their spores in the air of rooms inhabited by tuberculous patients, however, for the reason that the former may be relatively small in quantity, as well as from the fact that other forms of micro-organisms of a non-parasitic character may be present, and, by their exuberant growth in the culture media, mask the presence of the bacillus tuberculosis.

In addition to this method of entrance, it has been shown that the disease may be transmitted through the medium of the milk and meat of tuberculous animals, and likewise from the bacilli which may be deposited, with dust, upon food taken into the stomach. The acid secretion of the gastric juice, if in a normal condition would, in all probability, destroy a greater portion of these germs.

Wounds of the external skin may likewise furnish a way by means of which infection can take place. Instances of this are recorded by Tscherning and Meeklin (1885), and by Leser (1887). Instances are recorded of tuberculous wound infection following ritual circumcision of the Jews, where the mouth of the operator had been applied to the wound (Lindermann, 1883), Lehmann (1886), Elsenberg (1886). The nodular points, following post-mortem wounds in anatomists and pathologists, should also be mentioned in this connection. Kang (1885) and Riehl (1885) found the bacillus tuberculosis in these cases.

Many other points of infection have been pointed out, as for instance the granulation tissue in an operation wound (Kraske, 1885), chronic ulcers of the leg (Mathieu, 1884), chronic dermatitis (eczema), etc. Lupous disease of the skin in the neighborhood of a tuberculous sinus (Leser, Czerney, Steinthal) is to be explained in this way. It is also probable that some of the skin lesions in patients suffering from tuberculous disease of bone with discharging sinuses are the result of infection through the medium of carelessly handled pieces of dressing.

Like the point of initial lesion in syphilis, at the site of the first infection in tuberculosis a focus of granulating inflammation forms. This spreads peripherally, the centre undergoing at the same time caseous degeneration. In this manner a regional infection occurs upon the bronchial mucous membrane, to quote the best known of all tuberculous processes. In like manner the nodules and ulceration of tuberculous disease of the skin, tuberculous foci in the vagina, anus, rectum, etc., have their origin, as well as tuberculous ulceration of other portions of the intestine. In the latter there can be seen upon the serous surface at a point corresponding to the ulceration upon the mucous membrane a greyish white nodule marking the site of a fresh infection. From these points the bacilli invade the neighboring lymphatic glands, and in these granulating inflammation and cheesy degeneration soon follow. As in other infectious processes, such, for instance, as erysipelas, so in this, an invasion of the lymphatic glands may occur before any inflammatory condition which can be demonstrated microscopically has taken place at the point of original invasion. After the lymph glands have been attacked the bacilli spread from these comparatively very slowly ; in fact, general infection from a primary tuberculous lymph-adenitis is not so common or early an occurrence, as at first sight, would be supposed.

General infection occurs in the form of miliary tuberculosis. This is brought about by the introduction of the infecting agent into the circulation of the blood through the medium of the lymph channels, although growth of the bacilli is said to likewise occur in the veins (Weigert, Meissel and others). From these channels they may be introduced into all the organs of the body, and tubercle develop in the liver, kidneys, the serous membranes generally, etc.

In view of the fact that one-seventh of the entire population of the temperate zone die from tuberculosis, and that necessarily a large portion of the infecting agent from sputa, pus, etc., must exist in the atmospheric air, it would seem as if even a much larger percentage of persons would become infected than are. That this does not occur is due (1) to an absence of predisposition in individuals; (2) the absence of inherent power of movement on the part of the bacillus; (3) the slow growth of the bacillus, and hence the ease with which it may be overcome by other rapidly growing germs; (4) the purely parasitic nature of this bacillus and the fact that, although the spores are very resistant to ordinary destructive influences, yet, in all probability great numbers of them are prevented from developing in the presence of non-parasitic or saphrophytic germs, which develop in masses of organic or vegetable material.

As to hereditary predisposition, so-called, it may be greatly doubted if such a thing exists, so far as any special influences which predispose to this particular disease are concerned. Although medical men formerly laid great stress upon this point, yet the most that can be said concerning it at this time is the statement that there may be present special conditions of the tissues transmitted from one generation to another, which rob them of their power of resistance to this, as well as to many other affections. In many instances, however, this supposed hereditary predisposition is an acquired one, and results, particularly in children, from peculiarities of their environment, involving unfavorable conditions of nourishment, etc. These can be removed when the causes upon which they depend are removed. As additional evidence of the improbability of heredity being an important factor, it may be stated that in the United States, where the poorer classes are better fed, as a rule, than anywhere else in the world, tuberculosis prevails to a much less extent than in the countries of Europe, although the population is almost altogether made up from descendants of inhabitants of the latter.

Observation shows that the age of the patient has some bearing upon the liability to be attacked by the disease. Tuberculosis of the lymphatic glands occurs most frequently between the ages of three and twelve; the skin, bones and joints are attacked during the years of adolescence; and up to the twenty-fifth year pulmonary tuberculosis is most common. In the case of tuberculosis of the lymphatic glands in childhood, it should be borne in mind that during this period of life catarrhal affections of the nose, pharynx, conjunctiva, etc., are relatively more frequent; of chronic dermatitis, eczema, etc., the same may be said.

Whether or not all of the so-called scrofulous affections are due to the presence of the bacillus tuberculosis is still in doubt. In those instances in which this germ has been found upon the surface in chronic eczema (Volkmann), it is not at all clear that its presence in this locality was not purely an accidental circumstance.

(To be continued.)

STERILIZATION, WITH THE EXHIBITION OF A NEW STERILIZER.

BY FRANCIS H. STUART, A.M., M.D.,
Obstetrician to Brooklyn Hospital.

I originally only intended to present to the Society this sterilizer, but the President asked me to present a paper in connection with it and I, in a rash moment, consented. That the subject is of wide interest certainly is attested by the large audience remaining at this late hour. For this reason I will not regret having prepared this brief paper. I might also mention that the interest in the subject is such that three successive meetings of the Surgical Society of New York were largely occupied with the subject of sterilization. I regret that the lateness of the hour will preclude a general discussion, which I hoped my presentation would provoke.

In the early days of antiseptic surgery the effort was made to destroy or render inert the germs in the air. The investigations of Tyndall showed that germs were to be found everywhere. Pasteur, at about the same time, worked out the problem of fermentation, and showed that it was due to micro-organisms, and not to chemical action. These two investigators were co-workers as well as pioneers whose results Lister made the groundwork for the development of antiseptic surgery. Previous to Lister, the mortality after operations was appalling. Simple wounds were followed by fever, extensive suppuration, and often ended in death. There was never any certainty as to the result of an operation. There was an incalculable element of danger in all surgical procedures. No surgeon felt comfortable as to the results of what he did for his patient until the lapse of a certain time made the healing of the wound probable, and the development of what we now call septic fever improbable. Those whose diplomas are twenty or more years old have witnessed a complete revolution both in the practice of surgery and in the certainty of its results. None such can look over the past two decades without a feeling of thrilling exultation that he has been a witness of the marvelous change. At the same time the field of surgical work has been broadened. This has been a direct consequence of the study of "wound" fever by bacteriological methods. This has placed antiseptic surgery upon a solid foundation. Lister was confident that in recognizing that germs were present in the material used in dressing wounds and adhering to the instruments employed, he would be able to avoid such fever if he could free them from germs. He also endeavored to nullify the germs in the air. It is needless to detail his laborious and elaborate methods of procedure. Suffice it to say that some were found to be unnecessary, and others positively harmful, as for instance the carbolic acid spray. But, nevertheless, his investigations and teachings mark an epoch in the history of surgery, and its influence has also been felt in the field of medicine. Lister will always be recalled as the father of antiseptic surgery, as John Hunter is that of modern surgery, based upon the study of pathology.

Nor do the limits or purpose of this brief paper allow me to trace the history of the development of aseptic surgery out of the antiseptic methods. But this brief mention of the beginnings seemed appropriate to introduce what I wish to say upon the subject of sterilization.

The advantages of the aseptic or antiseptic methods are everywhere recognized by surgeons connected with the great hospitals. And those not operating in hospital amphitheatres and operating rooms also practice these methods in their major operations. Few indeed are the operations that are now performed without some effort to secure an aseptic condition of the wound by antiseptic measures. Yet there have been difficulties assumed by many general practitioners, and hence there is much neglect by them of methods which are easily within the reach of all who do any surgical work, major or minor, if the ways and means are pointed out. The technique of asepsis is simple and within the reach of all. Certain general principles are universally recognized, though those who are regarded as authorities still differ in minor details, or in the methods of attaining certain ends.

Antisepsis and asepsis have a common object—to destroy pyogenic or pathogenic germs. Up to the moment of the actual performance of the operation the methods of antisepsis and asepsis are practically the same. In the antiseptic method chemical antiseptics are used during the operation upon the hands of the operator and his assistants, upon the instruments, and upon the dressings, as well as applied to the wound itself. In the aseptic method chemical agents are not made use of *during* the operation or in the after-dressing or treatment of the wound. But the effort is made to have everything—hands, instruments, and dressings—that comes in contact with the wound during or after the operation in a thoroughly aseptic condition. In most of the hospitals of this country, at least, and probably in all hospitals, both methods are combined, though the trend of modern surgery is towards the aseptic method. In either case the main object is to free the seat of operation and to keep it free from pathogenic organisms.

In the performance of every operation sterilization of the following must be attended to separately :

The hands of the operator and his assistants.
The instruments to be used.
The dressings.
The field of operation.

The first and last may be considered together, for the *hands* of the surgeon and the *field of operation* are cleansed in practically the same way. Since in these we have to do with sensitive and organic living parts, we are restricted to narrow limits, and are debarred from the use of means and methods that are absolutely effective and which are applicable for sterilizing instruments and dressings. At best we can only attain relatively perfect results. We have to exclude dry heat, one of the best antiseptic means ; also the strong solutions of chemical agents, as well as steam, which is more universally applicable than any of the other means now in use. Absolutely certain asepsis of the hands or field of operation seems to be impossible with any means now known. But it is attained in some cases. Mr. Lockwood, Assistant Surgeon of St. Bartholomew's Hospital (*Br. Med. Jour.*, Jan. 27, '94, p. 175 f.) gives the result of twenty-one experiments upon the disinfection of the skin. Seven of these were successful, as proved by bacteriological tests. Of the fourteen other cases nine healed by first intention, and in five there was slight suppuration. These experiments were upon the skin of patients which had been carefully and specially prepared previous to operation, and clippings were taken and dropped into culture media just prior to performing the operation. As regards the hands in his investigations, as well as those of all others who have subjected the supposed aseptic hands to the test of the culture tubes, the tests show that it is extremely difficult to render the hands, and especially the nails, aseptic. But though we can never be certain at the moment of beginning an operation that the skin of either surgeon or patient is absolutely aseptic, yet the attempt must be made to secure such a condition, and no half-way measures ought ever to be relied upon. The nails are the most difficult to clean, but in all portions of the skin germs lurk and may render more or less futile all other efforts to secure an aseptic wound. How then should one proceed in cleansing the skin (of the hands or field of operation)? First of all remove all visible or possible dirt. This is best done by the common means of soap, warm water, nail-brush, trimming of the nails short, then scrubbing again with the soap and warm water. Next the soap is to be carefully washed off in warm water. Then the hands may be washed in alcohol. After this they should be held for at least three minutes in a 1 to 1,000 solution of bichloride of mercury or of the biniodide. After thus cleansing the hands and forearms the surgeon or his assistant should not touch anything that has not been rendered aseptic. If by chance he should do so the washing, as above described, ought to be repeated.

The field of operation is usually treated first with the soap, alcohol, and antiseptic bath upon the day preceding the operation, when this is practicable, and again just before beginning the operation. From the time of the first washing to that of the second the parts should be enveloped in an aseptic bandage.

Instruments:—The best method of sterilizing instruments is to boil them in an alkaline solution. This applies to all except edged instruments. One per cent. solution of carbonate of soda, or alkaline soap, one drachm to two quarts of water, will prevent the instruments from rusting during the boiling. Edged instruments may be made sterile by careful washing and then dipping in pure carbolic acid, which must be rinsed off in sterile water. Boiling edged instruments injures the temper and dulls the edge. It is sufficient to boil instruments for five minutes. No one of experience now uses steam to sterilize instruments, for there is no way known to prevent the rust which steam produces.

As regards *sponges*, if they are used, it is not worth anyone's while to try to sterilize them, as they can be readily obtained from reliable dealers in surgeons' supplies, put up in glass bottles ready for use. But many surgeons discard them on account of their being an organic substance, and hence extremely difficult to render and to keep aseptic. Instead gauze sponges may be used, and these can be rendered absolutely sterile by steam, as will be presently described.

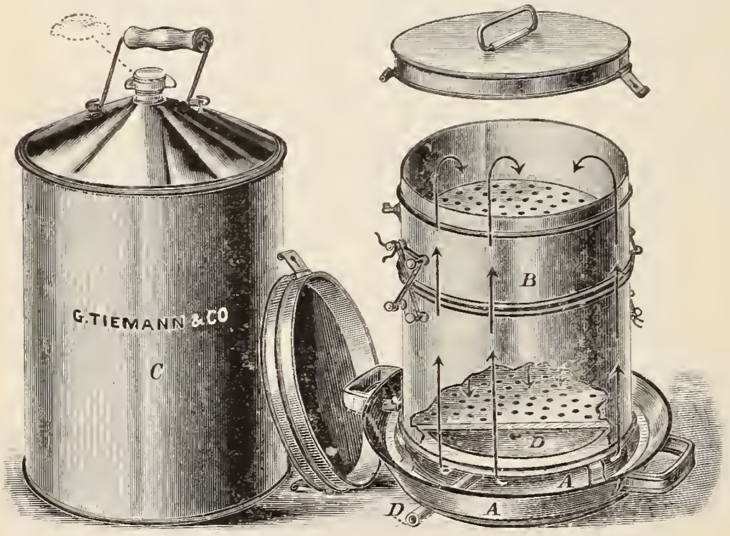
Catgut may be sterilized in the following way: It is first soaked in ether for forty-eight hours to remove the fat. The bottle should contain an abundant amount of ether, and should be shaken from time to time during the forty-eight hours, or else the ether should be changed a number of times. It is next to be wound upon glass spools. Then it is placed in a 1 to 1,000 solution of bichloride of mercury. In this it remains twenty-four hours. It is then transferred to absolute alcohol. The spools of catgut should be placed in a jar with a glass cover, like a specimen jar. If the cover is laid on, but not fastened, the jar may be placed in the steam sterilizer. As alcohol boils at 174°, it will boil in the steam atmosphere. This is a safe and very convenient way of boiling catgut in alcohol.

The *silk* for sutures may be sterilized by winding loosely upon glass spools, and then steaming it for half an hour upon three successive days. In this way it will be rendered absolutely sterile. This method, as has been shown by sterilization of culture media, is more certain than prolonged steaming upon one day.

Dressings, etc.:—Under this heading may be considered the gowns or aprons of the persons engaged at the operation, the towels used to surround the field of operation or used by the operator and his assistants, the gauze used for sponges, for medicated dressings or tampons, the absorbent material, as absorbent cotton, wood-wool, or other dressings, the bandages, sheets, blankets, and all other things that are used upon or about the wound during or after the operation. For rendering all of these thoroughly, completely aseptic no means has as yet been discovered that is to be compared with steam at 212°. This is what is called moist steam, which has been demonstrated to be more effective as a means of sterilization than dry steam at higher temperatures. For this reason many steam sterilizers have been brought forward in this and other countries. All seek the same end. Some are specially designed for hospitals where the quantity of material required is large; others are intended for the use of those who operate in private houses, who must either prepare the material at home or sterilize it at the place of operating. The latter is the preferable way, but is not always feasible. To combine either of these—that is to do the sterilizing at the home of the operator or at the place of operation, as may be most suitable in any given case—I have devised the steam sterilizer which I present to the Society at this time. I do not claim any special originality for this apparatus. It is an adaptation of the large Schimmelbusch apparatus, which is in use in most hospitals in Germany, England, and in many in this country. As has already been stated, steam at 212°, which is moist, has been shown to be the most efficient of all means of sterilization. In the Schimmelbusch apparatus is secured what is most desirable, moving steam, "live" steam, so-called. The steam enters the top of the receptacle for the material to be sterilized, and *descends through* it. This has been found to more perfectly penetrate the material and, at the same time, not to leave it damp. This principle of the Schimmelbusch device I have embodied in the small, portable apparatus you see here. Steam is generated in the pan, a part of whose bottom is depressed. This is to secure a smaller area and less quantity of water in order the more quickly to get up and maintain steam. There is left a narrow shelf, as it were, upon which the hood rests. Rising from the sides of the depressed portion of the bottom are four supports for a platform. This platform is concave, and is perforated in the middle, giving exit through a brass tube to the steam after it has circulated through the material to be sterilized. This tube has its point of exit at the edge of the boiler. The material to be sterilized is placed in one or more boxes which rest upon the platform over the boiling water. These boxes have a perforated bottom, and one fits on top of the other. During the process of sterilization the cover of the upper one is left off. On the completion of the sterilization the hood is taken off, and the upper box is covered by a tightly fitting cover, and this is fastened firmly on by hasps, with a French lock. A close bottom, fastened on by the same means, is placed under the lower box. The cover and close bottom are made aseptic by rinsing out with hot water. The boxes, with the sterilized material, can be taken to the side of the operating table, whether the sterilization has been done at the surgeon's house or at that of the patient. If the whole apparatus is taken to the scene of the operation, a cord is passed from the handles of the pan, which is the boiler, through the handle on top of the hood, and the whole is easily and safely carried. A particular advantage of the device I present is that one can have as many boxes, and these of different sizes, as are needed for different purposes. This apparatus, as thus made, can provide abundant sterilized material even for a large hospital, and be very much more economical than the large Schimmelbusch or other ones usually sold for such purposes. I have here one which was made for the Maternity Department of the Brooklyn Hospital. There are two boxes, fitting one on top of the other, and here is a large one, as large as both of the others together. Dressings for a dozen wards of a large hospital could be prepared by having a box for each ward. One boiler and hood would serve for all. For office use the sterilized material may be kept in the boxes, so that once sterilized it cannot become septic by handling and transfer to other receptacles. The kitchen range or any gas stove supplies the heat.

DESCRIPTION OF STEAM STERILIZER.

Devised by Francis H. Stuart, M.D., Obstetrician to the Brooklyn Hospital.



DR. STUART'S STEAM STERILIZER.

The boiler (A) consists of a shallow pan, a part of whose bottom is depressed about half an inch to permit the waste pipe (D) to pass through the water, giving vent to the steam after it has permeated the dressings and other material to be sterilized. Rising from the depressed portion of the pan, and resting upon four supports, is a shelf, which is slightly concave, so that any condensed steam may readily find its way to the centre, where is the opening of the waste pipe, indicated by (D). Upon this platform rest the boxes or box (B) for holding the dressings. These boxes are made with a perforated zinc bottom, which is about an inch from the lower rim. This perforated bottom is permanent. When the sterilization is completed a cover and close bottom are fitted on the receivers, which protects the sterilized material during transportation or until it is wanted for use. These are fastened on by means of hasps, which are secured by a swiveled catch. During sterilization the boxes or receivers are enclosed or covered by a hood (C) whose diameter is one inch greater than the boxes, and rises about an inch higher. The edge of the hood rests upon the portion of the bottom of the pan which is not depressed. The boiler or pan is filled with water nearly up to the bottom of the platform, which rises a little above the undepressed portion of the boiler so that the hood rests in the water, and so there is a perfect seal, preventing the escape of steam except as it passes *through* the dressings. The course of the steam is as follows: generated under the platform, it rises on all sides around the receivers, passing between them and the hood to the top of the receivers.. It passes down through the dressings, which lie upon the perforated bottoms, and can only find vent through the pipe (D) at the middle of the depressed platform, and finally has exit through (D), at the side of the boiler or pan. Thus there is secured a *constant current of steam*, live steam, so-called, which has been proven to be more effective than any other method of sterilization.

One especial feature of this sterilizer is that it will serve the surgeon for his private practice, and at the same time, by multiplying the receivers, it will effectively do all the sterilizing that may be required in a large hospital.

It may be used in any house, not requiring a gas or spirit lamp, as it can be set upon the stove or range. It requires no watching, as it is entirely self-regulating. •

Through an opening on the top of the hood, here closed by a screw cap, a thermometer may be inserted when it is desired to test the temperature within the receivers while sterilization is going on. When in operation the temperature is always 212° F.

DISCUSSION.

Dr. A. J. C. Skene: I would like to ask Dr. Stuart if either of those instruments is big enough to admit an obstetric forceps?

Dr. Stuart: They should be boiled; I do not treat them with steam, as it would corrode them. It is much better to boil all metal instruments than to treat them with steam. One of the receptacles is big enough, but operating surgeons are banishing the idea of sterilizing their instruments by steaming them, preferring the harmless way and shorter time required to boil them. It only takes five minutes to render an instrument absolutely sterile by boiling, whereas half an hour or more is required to render them sterile by steaming them.

Dr. J. S. Wight: I was going to say something on ligatures. I regard this subject as very important. I have been thinking of sterilizers quite a long time, and I think I will add this to those I have already, and find out which is best after all. But I really do not find the difficulty the doctor speaks of in the use of steam. If I steam instruments with steam pure and simple and wipe them off carefully they will remain bright. Occasionally I do find that a very highly polished knife will become tarnished if I use a slightly used towel, that it spots my instruments; but if I use a perfectly clean towel and dry them thoroughly I do not find any difficulty. It is a matter of the utmost indifference to me if I spoil a knife. I admit the importance of this process, but what I wanted to say something about was with reference to catgut ligatures, and I will tell you how I prepare them and have for years. It is an exceedingly simple way, and I have yet, since I have done so, to find a place where I have had suppuration from a ligature.

I go to New York and buy the highest-priced and very best strings. To pay a high price for a ligature and save a patient's life is the best kind of surgery. I have those ligatures in a box; I buy them in a quantity, and then I go to a reliable druggist and have him give me what is pure juniper oil. The druggist rubs two grains of mercuric chloride into eight ounces of pure juniper oil, which is put into a glass-stoppered bottle. Into this bottle are put the catgut string rings, and after a few days they are ready for use. I do not allow anybody to prepare those ligatures for me. It is only in the utmost emergency, when I cannot get my own, that I use those of the hospital. They are sometimes dangerous, and I do not use them; but I prepare them myself, and then I regard them as reliable.

One thing more, if you will allow me. I believe I wrote one of the first important articles on sutures in this country, and that was with reference to horse hair. I simply wrote up my experience in the use of horse hair ; that was before anything was known about antiseptic surgery, and now I use silk. For the most part it is the best suture material that has ever been devised, if properly prepared; and I don't know of anything that is its equal in respect to resistance, and under all circumstances. I have used other things; but it is so reliable to have good silk. I go to the dry-goods stores and buy the most expensive silk, embroidering silk, and get it on those large spools for which I have to pay nearly a dollar a spool. I take the silk and wind it off the spool and drop it into the steam sterilizer, just drop it down in a sort of coil and leave it in there for half an hour. I then have assistants, with hands as carefully prepared as I would for operation, take the silk and lift it out, and have my assistant, generally a trained nurse, hold it so I can wax it and wind it on glass spools and seal it up. The wax I use is made of one part iodoform and four parts beeswax and just enough almond oil to keep it from being hard. The wax I keep wrapped up in sterilized paper. I put in a little aseptic cotton, borated cotton, cork it and then put a secure cap on that. At the time I come to do my operation I take one of these sealed glass tubes and put it in the sterilizer, and sterilize it in that way over again by the dry heat. I have left such ligatures in wounds in the abdominal wall, in stumps, in the breast, etc., for an unlimited length of time without suppuration. Mr. President, I wont go into the subject any further ; I am delighted with the Doctor's sterilizer.

Dr. J. M. Van Cott, Jr.: It seems to me there are two very ingenious points in Dr. Stuart's apparatus: one is the method of getting the steam through the passages, and the other the inclination of the roof so that the steam cannot get in and wet the material. This meets one of the peculiar desiderata of the sterilizing apparatus, *i.e.*, the getting the steam into and through dressings thoroughly, without wetting them.

EXTERNAL PERINEAL URETHROTOMY.

BY H. W. RAND, M.D.

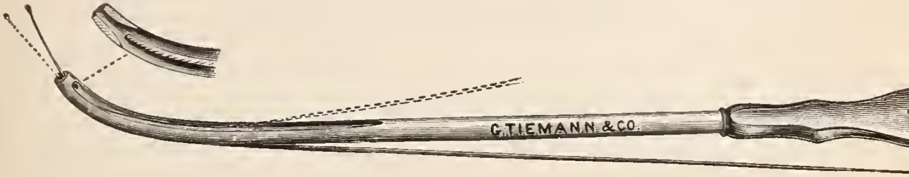
Professor of Diseases of The Genito-urinary Organs, Long Island College Hospital.
Surgeon to The Long Island College, St. John's and Kings County Hospitals.

Read before the Brooklyn Surgical Society, May 17, 1894.

There still seems to be a certain degree of distrust among some of the members of the profession, as well as among the laity, in regard to the safety and value of any cutting operation in stricture of the urethra; and more especially where an external urethrotomy is the one in question. From a moderately extended experience with interrupted dilatation, internal and external urethrotomy, I am led to believe that the latter operations, when properly done, are safer procedures in very many cases than interrupted dilatation, even when the latter is carefully and skilfully carried out. Where deep strictures are not of small calibre, or irritable, inodular or resilient, and the passage of the sound is not repeatedly followed by chills and fever, dilatation is still our best resource. Where, in deep strictures, any of the conditions just mentioned obtain, external urethrotomy should be promptly performed, for the dangers of delay, in at least a majority of such cases, are greater than those incident to the operation.

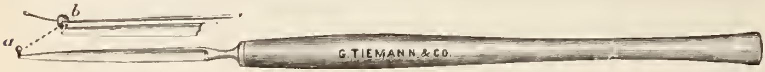
A few words as to technique: Where urine, however small in amount, passes through the entire urethra, it is nearly, if not always, possible to pass a guide, with cocaine, oil, time, patience, and a moderate amount of experience at command. Overdistension of the urethra with oil will sometimes defeat the operator's object, for such distension does not materially, if at all, dilate the stricture, but it does distend the more or less normal urethra in front of the coarctation, and may open up false passages and lacunæ in which the point of the guide will readily be caught. Enough oil only to thoroughly lubricate the urethra as far back as it can be carried by gentle pressure should be used. One may not succeed in passing a guide the first or second sitting, but will on the third or fourth trial, adopting different manœuvres and using instruments with beaks of different lengths and bent at different angles. Guides with corkscrew points I have never found of use. It is better to aspirate above the pubes in cases of retention, even if it must be repeated, and prepare our patient by a couple of days' rest and treatment, in the hope of then being able to introduce a guide rather than to operate without—better for both patient and surgeon. I have never seen any trouble whatever follow a properly executed aspiration, even in the old, although serious symptoms have been said to occur at times. Such I believe have been due, rather, to the previous and oftentimes misdirected and violent instrumentation of the urethra.

The chief advantage of a guide is, undoubtedly, the certainty and ease with which the operator can gain access to the bladder; but while, in the absence of such a guide, he may be able to cut through the stricture to the posterior urethra, or tap it posteriorly, and then connect it with the anterior urethra by incision, the ultimate result will not be so good as it would if he had been able to make his incision directly through the old channel, however narrow and tortuous it may be; for if permeable at all, it still retains sufficient of its original structure to insure against far less subsequent contraction than when the incision is carried entirely through peri-urethral tissue, as must occasionally be done when cutting without a guide. I have several times seen the strictured portion so narrow and tortuous that had a straight median incision been carried through it, the knife would have made a complete oblique section of the lumen of the urethra in two or more places.



In operating with guide and tunnelled sound, after the method known as Gouley's, we are in danger of cutting our guide as we reach the urethra. This I have seen happen in most competent hands. To prevent this accident, I have had some tunnelled sounds made so as to carry the guide upon the concavity of the instrument and thus out of the way of the knife, retaining the groove and tunnel on the convexity as well; for the original instrument best keeps the guide out of the way of the knife in the second method of urethrotomy of which I shall speak.

In a shallow perineum, where the stricture is only moderately extensive and not of very small calibre, I still prefer to operate much the same as originally described by Gouley. In a deep perineum, however, especially where there are extensive and tight strictures present, when the sound has been carried over the guide to the anterior face of the stricture, I turn its concavity to the floor of the urethra, so as to make its beak prominent in the perineum. The assistant presses it firmly and steadily against the floor of the urethra, taking care not to make a false passage with its point or push it through the incision when the urethra is opened. The operator, steadying the instrument between his fingers, cuts down upon and exposes its beak. He then passes retraction threads from within out through the edges of the urethra and overlying tissues. The distal end of the guide is now withdrawn from the sound and out through the perineal wound, still being careful to leave the proximal end in the bladder. The sound is now withdrawn, and if necessary a blunt hook is used to retract the upper end of the urethral wound. In tortuous and inodular strictures, when this stage of the operation is reached, I have often found it difficult to follow the guide with Gouley's probe-pointed knife, or with any other instrument hitherto advised for the purpose. This was especially so in a deep and vascular perineum where the stricture was so close as to be already fully distended by the guide, and admitted the knife only by the exercise of so much force as to endanger cutting the guide—an accident that once happened to me. Some old fibrous strictures cut with even more resistance than do some of the whalebone instruments.



To meet this difficulty, I have had Messrs. Tiemann & Co. make for me this small stricture knife. Its blade is narrow, and one and a quarter inches in length. At its point is a ring just large enough to admit the average guide, and as delicately made as is consistent with the work required of it. This knife is threaded over the guide and pushed through the stricture until diminished resistance indicates that division of the stricture has been accomplished. In my recent cases this part of the operation has been greatly facilitated by its use. The knife should be carried along in the axis of the guide while the latter is kept moderately tense.

After dividing all bands that are found in the roof of the urethra, and all anterior strictures, using the dilating urethrotome for the latter, the bladder and urethra are thoroughly irrigated with Thiersch or a saturated boric acid solution, and a full-sized catheter is introduced into the bladder for drainage.

The administration of salol for two or more days prior to operation, and for several days thereafter, an aseptic operation as far as such is possible in these cases, the retention of a catheter for twenty-four to forty-eight hours, the regular douching of bladder and urethra once or twice in twenty-four hours, have practically done away with urinary fever, in my experience. In only three of my last twenty-two cases has there been a chill or a temperature above 101°. In the first two of these cases the catheter became obstructed during the night, and urine escaped by its side. In the third the patient had hæmophilia, and I was obliged to tampon a second time to restrain hæmorrhage.

I have records of fifty-one cases of external urethrotomy. All made good recoveries. In a few of my earlier cases which were done without preparation or the subsequent use of catheter drainage, marked urethral fever followed, and the period of convalescence was somewhat protracted. In none has there been suppression of urine, although in some but little urine was excreted for the first few hours. In only one case was there troublesome bleeding of any duration, and that was in the case of hæmophilia previously mentioned. In only four cases was any ligature required. In none did fistula follow operation. Where fistulæ had existed prior to operation, they closed promptly thereafter in all but two cases. The first was a sailor, with traumatic stricture following extensive injury of the perineum and complete rupture of the urethra. In the second, a fistula had existed for three months prior to operation, and through it the patient had passed most and, at times, all of his urine during that entire period. It was three inches in length, and extended from the left side of the scrotum near the thigh to the anterior part of the prostatic urethra. Thorough curetting at the time of operation, and later, stimulating injections, have not yet brought about final closure, even at the end of twelve weeks, although it now permits only the slightest trace of leakage, which is daily becoming less evident.

All but three of these cases had strictures of large or small calibre in the penile urethra, which were operated on at the same time by dilating urethrotomy. In internal urethrotomy I have never found it necessary to drain the bladder by the introduction of a catheter through a puncture in the perineum and membraneous urethra, as suggested by Harrison. Operations anterior to the bulb do well enough without it if the urine is normal; and when the bulbo-membranous region is involved, perineal section is more accurate and safer than internal urethrotomy, even when the latter is combined with this form of bladder drainage. In a case of anterior stricture associated with cystitis I should, however, adopt Harrison's method both on account of the beneficial effect of such drainage upon an inflamed bladder and to prevent contact of pus-laden urine with the incised tissues. In the few cases in which I have been unable to introduce a guide, I have found Wheelhouse's operation the least difficult and most satisfactory method.

Where an extensive incision of the perineum must be made, suture of the upper portion of the wound, including all the tissues down to the urethra, materially hastens its closure. Not infrequently have I had patients pass all their urine *per urethram* after the seventh day, and some as early as the fifth, but complete closure of the more superficial parts of the wound at too early a period must be avoided.

I have learned to look upon a clean and well-performed external urethrotomy as an operation of far less danger to the patient than the frequent introduction of flexible bougies, or guides and tunnelled sounds, in cases of stricture of the deep urethra that are of small calibre and that are passed with difficulty. In inodular, irritable and resilient strictures, of whatever calibre, it is the most prompt, effective and safe procedure at our command. In the class of cases that most urgently demand this operation, a permanent cure cannot, unfortunately, be promised, and the future occasional use of the sound is a necessity. How certain it is that recontraction will very often occur, without this precaution is taken, is well illustrated by the case of a patient, aged 72, referred to me by Dr. G. C. Jeffrey. This man was operated on by Sands in 1872 and by Weir in 1883, and yet with all this experience he neglected to use a sound, and a few months ago I did a third external urethrotomy upon him, from which he made a prompt recovery. In six cases, however, which I have been able to observe for from three to ten years, there has been no tendency to recontraction. These were cases in which the strictures were of small calibre, but involved only about an eighth of an inch of the urethra.

It would be very desirable to have accurate statistics on this point, for I am inclined to believe that this free division of strictures both on the floor and roof of the urethra, is followed by a permanent cure in a larger proportion of cases than the operation has hitherto been accredited with.

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EDITORIAL.

PRESIDENT'S ADDRESS.

The president of the County Society, Dr. George McNaughton, in his address to the members at the April meeting, made some exceedingly important recommendations which show his thorough grasp of the needs of the Society, and of the way by which those needs are to be supplied. No president has come to this high office with more practical experience in all the details of the Society's management than he, and as this fact is appreciated by all, it is not surprising that his recommendations have been received most cordially and most unanimously.

Of the recommendations, that which looks to the procuring of a new home for the Society and for its library is, of course, the most important; and if such a building is within the possibilities, a committee such as is contemplated should be able to make substantial progress before a twelve-month has passed.

The appointment of a Committee on Entertainment and Reception is also a wise step in advance. It can hardly be expected that new members will be satisfied with nothing more than mere attendance upon the scientific meetings. They should find a true fellowship in the organization, and this can only be brought about by a cordial grasp of the hand. and an opportunity to meet in social intercourse their medical brethren. Were an acquaintance with one another the rule and not the exception in medical societies, professional bickerings and misunderstandings would be exceedingly rare occurrences. We are glad to bear testimony to their remarkable infrequency in the County Society, a fact which is the more remarkable when it is remembered that the membership is not far from five hundred.

President McNaughton is to be congratulated on what he has already accomplished for the improvement of the Society, and we venture to predict that if his recommendations are substantially carried out, his presidency will stand out with greater prominence in the history of the Society than any other since its organization.

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BOARD OF PHARMACY.

Few appreciate the good work which the Board of Pharmacy has accomplished in the past, and which it is almost daily accomplishing in the safeguards thrown around the dispensing of drugs, and the contribution which the medical members of the Board have made in bringing about this result. The report of Dr. Hutchinson, who, with Dr. Bartley, represents the Medical Society of the County of Kings, will be read with great interest. It is certainly a most unfortunate state of affairs that while drug clerks must submit to the most rigid examination before receiving the right to dispense dangerous remedies, any drygoods store can, through its totally incompetent clerks, sell such drugs as antipyrine and laudanum, without let or hindrance, and that there is no law to prevent it. We hope that before another legislature meets, the Board will frame such a law as will effectually protect the community from the greed of merchants whose only desire seems to be to amass wealth, even at the risk of endangering human health and life.

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CHARLES JEWETT, M.D., D.S.

At the Centennial of Bowdoin College, which occurred in June, the degree of Doctor of Science was conferred on Prof. Charles Jewett, of this city.

In this connection it is interesting to note that the claim which has been made for Dr. Wm. Thomas Coggin, of Athens, Ga., that he performed the first symphyseotomy in this country, has been investigated by the Medical Society of the County in Alabama in which Dr. Coggin formerly lived, and is pronounced by that body as entirely unsubstantiated. The president of the Society, in a communication to The Alabama *Medical and Surgical Age*, and published in the June number, and which, by the way, is very entertaining reading, makes the statement that in this investigation of Dr. Coggins' claim, no such place as "the Freedman place," at which the operation was said to have been done March 12, 1892, could be found; that no such person as Mr. Cary Hughs, the husband of the patient, was ever known or heard of in that section, and that the only Dr. Slaughter who was ever heard of in that region is Dr. C. J. Slaughter, and that notwithstanding Dr. Coggin's claim that he was assisted in the operation by Dr. Charles Slaughter, Dr. C. J. Slaughter says he never assisted in or heard of any such operation by Dr. Coggins or anyone else.

In view of the fact that Dr. Coggin has not, to the satisfaction of his Alabama professional brethren, substantiated his claim to having performed the first symphyseotomy in this country, he can hardly expect that those of us who are strangers to him and who live so far away will award him this distinguished honor. We shall therefore continue to claim it for Brooklyn and for our beloved townsman, Charles Jewett, M.D., D.S.

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PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The regular monthly meeting of the Medical Society of the County of Kings was held at the Society's rooms, No. 346 Bridge Street, on Tuesday evening, June 19, 1894, at 8.30 P. M.

The meeting was called to order at 8.30 P. M., with the President, Dr. Geo. McNaughton, in the chair.

There were present about fifty members.

Minutes of the last meeting were read, and on motion duly made and seconded, were approved, as read.

The Council reported favorably upon the applications of Dr. S. J. McNamara, Dr. Alfred S. Ambler, Dr. Geo. E. West and Dr. William D. Sylvester.

The following gentlemen having been regularly proposed and favorably passed upon by the council and duly announced to the Society, were declared elected active members of the Society.

Dr. Hugo Koethe, Dr. Willis H. Philles, Dr. Jacob Londoner, Dr. Burnett C. Collins and Dr. Harry W. Lincoln.

Dr. Hiram C. Elliott, of Woodhaven, L. I., was declared elected a corresponding member of this Society.

The following gentlemen were proposed for membership in the Society: Dr. Andrew D. Vance, Brooklyn Throat Hospital, L. I. C. Hospital, 1894: proposed by Dr. William Browning, endorsed by Dr. Geo. McNaughton; Dr. Edson C. Chick, 303 Greene Avenue, L. I. C. Hospital, 1894: proposed by Dr. J. H. Hunt and endorsed by Dr. William M. Hutchinson.

SCIENTIFIC BUSINESS.

The paper of the evening, entitled "Some Observations upon the Present Status of the Surgery and Physiology of the Spleen," was read by Dr. James P. Warbasse, and discussed by Dr. Hunt, Dr. Bogart and Dr. Eliza Mosher.

REPORTS OF COMMITTEES.

The report of the committee on the removal of the injured was read.

It was regularly moved and seconded that the report be accepted and the committee continued as requested. Carried.

REPORT OF THE TELEPHONE COMMITTEE.

Dr. Emery: I am sorry that I am not prepared to make a report in full. A gentleman called at my office this morning desiring me to submit to the members of the Society an automatic instrument, and I believe he is here prepared this evening to do so. As far as the Bell Telephone Company is concerned, we have been unable to make any arrangement; possibly, in view of recent occurrences, we might be able to do better than in the past. If the Society will bear with us a little longer and continue us in office we will endeavor to do so. We report progress.

Chairman: Last year there was a committee elected to the Board of Pharmacy, composed of Dr. Bartley and Dr. Hutchinson. Have they reported on last year's work?

Dr. Hutchinson: The term of office, Mr. President, for which two of the members of this Society were elected is for three years. We were elected three years ago, in 1891. I think the members of the Society know something of the work of the Board of Pharmacy of this county, but I have prepared a brief synopsis of the three years' work taken from the annual reports of the Secretary of the Board, which I will submit, with your permission.

ABSTRACT OF REPORTS OF THE BOARD OF PHARMACY OF THE COUNTY OF KINGS FOR THE THREE YEARS ENDING JUNE 19TH, 1894.

Thinking that possibly the members of this society might be interested in knowing something of the work of the Board of Pharmacy, I take the liberty of submitting, on behalf of the Board, the following brief synopsis of the Secretary's reports :

The two members elected by this Society, Drs. E. H. Bartley and W. M. Hutchinson, met the two representatives of the Kings County Pharmaceutical Society, Mr. Wm. M. Davis and Mr. Donald L. Cameron, on September 28, 1891, and organized by electing Mr. Davis president and Mr. L. T. Perkins the fifth member and Secretary.

Since that time the Board has held fifty-seven meetings for business, or the examination of applicants.

There have been received 282 applications for examination as pharmacists or assistant pharmacists ; of this number 194 have passed successful examinations, 136 as pharmacist and 58 as assistant.

There have been registered 629 persons upon the approval of the present Board, as pharmacist or assistant. Certificates of qualification, entitling the holders thereof to register in this County, have been received from State Boards and Colleges of Pharmacy located in nearly every State in the Union and from Colleges and Universities in nearly every foreign country. The number of young men of foreign birth or education is very rapidly increasing of late, so much so that the indications are that in a few years the practice of pharmacy will not be entered into at all by native born Americans.

During each of the three years that the present Board has been in existence, a canvasser has been employed to inspect every pharmacy in the County, and report all violations of the law to the Board.

The cases thus discovered have been investigated, the unregistered proprietors or clerks have been notified that they were violating the laws governing the practice of pharmacy, and to their credit be it said that with a very few exceptions, they have proceeded to register forthwith. At the present moment we are in knowledge of but one store within the boundaries of this County where no certificate of registration can be found.

There have been but two charges against a druggist made by physicians. In both cases full hearings were given and much testimony taken, the Board deciding that in both the charges were sustained, but in neither was it thought best to revoke the druggist's certificate, as the testimony was somewhat conflicting. Both were plainly admonished not to repeat the offence on pain of having their license revoked.

In conclusion we cannot refrain from testifying to the obligation that the Board, as well as the physicians, druggists and general public of this County are under to the faithful and efficient Secretary, Mr. Perkins, who has certainly done more than any man now living to elevate the standard of scientific attainment possessed by those who dispense our prescriptions and sell drugs and medicines to the members of this community.

The point which I omitted in the report which is perhaps of interest to the Society is a matter which has given this Board considerable anxiety and has proved to be the source of a good deal of difficulty. I refer to the selling of drugs, medicines and poisons by what is known as department stores. They are of course provided with no licensed clerk or assistant. The Board have done what they could to prevent this, but on account largely of two facts have not succeeded in accomplishing very much. One reason is the fact that the District Attorney has not so far been induced to coöperate with us and take any steps towards prosecuting these cases when direct testimony has been secured by the Board. Another reason is that the Board has no funds to retain its own counsel to prosecute these sellers of drugs.

Dr. Hunt: I move the report be received and published in the Journal and the members of the Board representing this Society receive the thanks of our Society.

Motion duly seconded and carried.

Chairman: Two members from the Society are to be elected to the Board of Pharmacy, to take the place of the gentlemen whose term of office has expired. I think we may as well do that now.

Dr. E. H. Bartley and Dr. W. M. Hutchinson were nominated to fill such vacancies.

Dr. Maddren: Do we elect by ballot?

Dr. Hunt: We have no authority bearing upon that subject. We simply have the privilege by the State Law of electing them as we please—by viva-voce vote or not. The Board of Pharmacy has been in existence for fifteen years. The first two were elected and re-elected and served six years, serving the Society and the County. By the way, they get no pay for this work. The next Board served six years, and if we can induce the present Board to accept for another three years, it is our good fortune.

On motion the nominations were closed.

On motion duly made and seconded, the Secretary was instructed to cast the ballot of the Society for Drs. Bartley and Hutchinson.

The ballot having been so cast, the Chair announced the election of Drs. E. H. Bartley and W. M. Hutchinson to fill the above named vacancies.

REPORT OF THE COMMITTEE ON PRESIDENT'S RECOMMENDATIONS.

Dr. Madden: I move that we take up the recommendations one at a time and consider them separately, taking up No. 1 first.

Motion was seconded and carried.

Recommendation No. 1 was read by the Secretary as follows:

That a Committee of five be appointed by the President to revise the By-Laws of this Society and that the Committee be required to make its report to the Society at the October meeting, that ample time may be afforded for consideration, amendment and notice prior to action at the Annual Meeting.

On motion duly seconded recommendation No. 1 as read was adopted.

Recommendation No. 2 was read by the Secretary as follows:

That the recommendations of the President to expunge these By-Laws, viz: Section 7, Chapter IV, Section 5, Chapter X, and also Chapter XIX, referring to the granting of license to practice medicine in Kings County, which are in conflict with the present laws of the State of New York, are approved by your committee, and it is recommended that the proposed committee on By-Laws carry into effect this recommendation.

On motion duly made and seconded, recommendation No. 2 was adopted.

Recommendation No. 3 was read by the Secretary as follows:

The recommendation that the By-Laws be so modified as to more exactly define the work of the Council as the representative body of the Society, was heartily approved and endorsed by your Committee as tending to the greater well being of the Society, and we recommend that the proposed Committee on By-Laws also carry this recommendation into effect.

On motion duly seconded recommendation No. 3 was adopted.

Recommendation No. 4 was read by the Secretary as follows:

We also heartily approve your recommendation that there shall be the following Standing Committees:

a. On Membership.
b. On Directory for Nurses.
c. On Reception and Entertainment.

The first and second are already in existence and have done and are doing good work. A Standing Committee on reception and entertainment is a necessity and can do much to remove the reproach of the members that it is difficult or impossible to become acquainted at our meetings or gatherings.

On motion duly made and seconded recommendation No. 4 was adopted.

Recommendation No. 5 was read by the Secretary as follows :

We also approve your recommendation that all Standing Committees, whose appointment is not otherwise provided for, shall be appointed by each incoming President and shall report to the Society at each Annual Meeting. We would recommend also that each of the Standing Committees hold over until their successors are duly appointed and take office, and that the proposed committee on By-laws incorporate the foregoing recommendations in a By-law on Standing Committees.

On motion duly made and seconded recommendation No. 5 was adopted.

Recommendation No. 6 was read by the Secretary as follows :

Your Committee also recommend the appointment of a Committee of five by the President to revise the Fee Bill.

On motion duly made and seconded recommendation No. 6 was adopted on division by a majority vote.

The Secretary then read recommendation No. 7 as follows :

The Committee dwelt upon your statements in regard to the want of space to properly house the library ; the inadequacy and unfitness of our place of meeting, and the necessity for prompt action to provide another and better place of meeting, and a fireproof building for the library.

Your Committee, believing the necessity for action at this time urgent, and seeing that this is the Medical Society of the County of Kings, and desiring to suggest a plan that will be completely representative, would recommend that the President appoint two members from each of the Wards of the City and two members from each of the County Towns, or County Town. These members to constitute a Committee on New Buildings, with power to consider and devise ways and means, site, building, etc., etc., pertaining to the same.

Said Committee shall co-operate with the Board of Trustees and report from time to time to this Society.

On motion duly made and seconded recommendation No. 7 was adopted.

On motion duly made and seconded all the recommendations were unanimously adopted as a whole.

On motion duly made and seconded the meeting adjourned.

David Myerle, M. D.,
Secretary.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D.

HYDRORRHŒA GRAVIDARUM.

S. Chazan (Centralbl. für Gyn., Feb. 3, '94, Br. Gyn. Jour., Feb. '94). Three principal sources of the fluid which escapes from the uterus during pregnancy are : the uterine wall, the space between the fœtal membranes, and the sac of the amnion. Hennig and Schroeder believe that the fluid collects between the chorion and the decidua, while Kaltenbach and others consider that it lies between the opposed surfaces of the decidua vera and reflexa. The fact that the escape of fluid often begins in the third or fourth month, at a time when, under normal conditions, the two deciduæ have not united, supports the views of Kaltenbach. In the early period of pregnancy a space is found to exist between the decidua vera and decidua reflexa, which ordinarily contains only a little mucus, but which might become distended with fluid by hypersecretion from the decidua, or by hæmorrhage. In recorded cases there has been no direct evidence produced that union had not taken place between the decidua vera and decidua reflexa ; but this seems to be the probable explanation of the fact that the greatly thickened vera has been sometimes separately expelled after the placenta.

The nature of the pathological process which causes decidual hydrorrhœa is still obscure. Braun emphasizes the existence of previous endometritis with exudation. Hegar considers the morbid process to be of the nature of hypertrophy of the decidua, especially of its glands. Scanzoni believes it to be due to transudation dependent upon the condition of the blood. Zini regards the fluid as an extravasation resulting from the hyperæmia, and increased vascularity of the uterine mucosa. Chazan himself is inclined to refer it to the periodic congestion of the genital organs, which occurs during pregnancy.

Duges and Jörg indicate the allantois as a possible source of the fluid in hydrorrhœa. It is well known that in many instances the amnion and chorion, instead of being glued together by an amorphous tissue, are separated by a collection of fluid, so that two sacs are present in the afterbirth. It may be that these so-called forewaters can escape during pregnancy, and thus explain some cases of hydrorrhæa, but this cannot be proved, because we know no sign by which these waters may be distinguished. Döderlein has proved that in a case observed by him, the forewaters could not be chemically distinguished from the liquor amnii.

There still remains that form of hydrorrhœa in which the liquor amnii escapes during pregnancy. Chazan records the case of a primipara, aged twenty-three, who consulted him, when five months pregnant, for thirst, weakness, and dyspnœa. He diagnosed hydramnion from the large size of the uterus. About the end of the sixth month labor pains set in, and abortion seemed about to occur. After the pains had lasted for some hours, however, a large quantity of watery fluid escaped, and the pains then gradually ceased. Fourteen days later a second escape of fluid occurred, preceded by pains of similar character to the first. The patient then went without any further loss of fluid to term, when a normal labor occurred, the child being strong and well developed. The afterbirth was carefully examined, the chorion was found to be separated from the amnion over a wide area ; besides the opening through which the fœtus had passed, a second aperture, as large as a sixpence, with slightly thickened edges, was found in the amnion in the separated area.

TREATMENT OF OPHTHALMIA NEONATORUM.

Dr. Abadie (La Semaine Medicale, 18 Mai, '94). The superiority of cauterizations with nitrate of silver in purulent ophthalmia is so universally recognized, that it appears at first sight to be useless again to discuss this question and to advocate the popularization of the treatment. Nevertheless, I do not hesitate in bringing it up again, because I have for some time noticed a recrudescence of disastrous results, due to the employment of defective methods.

Various efforts have been made of late to modify the classic treatment of purulent ophthalmia, in spite of its having proved to be excellent in every way. Given the microbial nature of the disease, everybody thinks himself authorized to try, and to invent, all sorts of microbicides.

Nitrate of silver is the only substance that exerts a truly specific action on the gonococcus, even when it develops in its medium of predilection, the human conjunctiva. This is the reason why this remedy has maintained its supremacy up to the present time, and whenever an attempt is made to replace it by something else, one risks failure.

Practitioners who preceded us employed the nitrate of silver either pure, or in solutions that were too strong. Moreover they were ignorant of the fact that there exist abnormal forms of the disease in which even cauterizations with a three per cent. solution, when too frequently repeated, are fraught with danger. Hence their fear, their hesitation and their failures.

Speaking generally, a solution stronger than three per cent. should not be employed ; but the cauterization should be thoroughly done ; that is to say, cost what it may, the eyelids must be turned over as far as possible, especially the upper one, so as to enable us to reach the upper cul de sac and cauterize everywhere with a brush, until the mucosa becomes slightly white. Then the region is immediately washed with pure or salt water, in order to remove any excess of the caustic. The cauterization is repeated twice in the twenty-four hours. In general when a second cauterization is practised the superficial eschar of the first should be almost entirely eliminated. If it persists, and is thick and adherent, giving to the mucosa a diphtheroid appearance, there is nothing to do but to wait.

In the interval between cauterizations, an antiseptic liquid of some kind is to be employed, but it is hard to say which one is preferable. Solutions of boracic acid, perchloride of mercury (1:5,000) or permanganate of potassium (1:1,000) are equally valuable. On the whole I give the preference to a 1:1,000 solution of nitrate of silver, recently suggested by Dr. Burchardt. This author even advises not to use anything else in purulent ophthalmia, employing almost continuous irrigations with a 1:1,000 solution. In view of the clearly specific action of nitrate of silver, it is possible that this simpler method may give good results, but I have not yet dared to give up cauterization with a three per cent. solution, which has proved so successful hitherto.

Discussion.—Dr. de Wecker : I think the best prophylactic measure is suppressing the disease in the mother, which can be accomplished by the obligatory disinfection of every woman before delivery. Whenever an infant affected with purulent ophthalmia is brought to me for treatment, I am in the habit of inquiring whether the mother was disinfected before the child was born. The reply is uniformly in the negative. I also invariably tell the persons interested that it is absolutely necessary to disinfect the mother on the occasion of her next pregnancy, and to use for this purpose the liquid employed for washing the eyes of the newborn infant—a 1:4,000 solution of perchloride of mercury.

Dr. Valude: Like Dr. Abadie, I am convinced that cauterization with nitrate of silver is the only practice to be recommended for the treatment of purulent ophthalmia, and I do not believe that anyone can seriously think of replacing this method by antiseptic irrigations of whatever nature. All the same it cannot be denied, and I have had occasion repeatedly to satisfy myself on this point, that the popularization of this treatment is not without danger. Midwives, in particular, do not understand the proper use of this caustic; they either apply it too energetically and thus cause that membranous thickening which is so injurious to the cornea, or else they only pass along the conjunctiva bordering upon the free edge of the eyelid, the deeper portion continuing to furnish the virulent pus which constitutes the real danger of ophthalmia. Under such conditions I think it would be better that uninstructed persons were restricted to the use of simple irrigations.

Dr. Armaignac (Bordeaux): In the adult, as well as in the infant, I employ a two per cent. solution of nitrate of silver, and this strength has proved thoroughly satisfactory. I have generally met with success in the treatment of my cases.

MICROBES IN THE MILK OF NURSING WOMEN.

Ringel (Münch. Med. Wochensch., No. 27, Br. Gyn. Jour. xxxvi). Ringel examined the milk of twenty-five women, twelve of whom were healthy. With minute precautions to insure accuracy, he found the milk sterile in only three cases; he obtained the white staphylococcus in seventeen, the yellow in two, the two together in one case, and in two instances he found the white staphylococcus together with the streptococcus. As the microbes could not be due to genital infection, the idea was suggested that they might come from the child's mouth, the white staphylococcus having been, in fact, found on the child's tongue. But having examined the milk of a woman who had not been suckling, and whose nipples had been disinfected, Ringel still found the staphylococcus.

It has been found that the staphylococci are identical with those discovered by Rosenbach in abscesses; yet they cause no inflammation of the gland. The reason is probably to be found in the fact that their virulence under these conditions is greatly diminished, and that milk seems to possess germicidal properties. If the micrococci be sown on gelatine, they develop well, except on parts where a drop of milk has been placed.

Ringel found the streptococcus only in cases of puerperal disease, and concludes that it gets into the milk by metastasis.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

OBSTRUCTIVE SUPPRESSION OF URINE.

Wood (Boston Med. and Surg. Journal, May 17, '94): These are due to the compression of the urinary passages above the urethra so as to permit of only a comparatively small quantity of urine passing into the bladder. A very remarkable case of this kind was reported a few years since by Dr. J. W. Farlow, in which compression of both ureters was caused by a malignant growth of both Fallopian tubes, and in that way the calibre of both ureters was so much constricted as to be at times completely occluded. At one time a period of twelve days elapsed without any urine being secreted. Obstruction of the ureters by calculi is, perhaps, the most common cause of obstructive suppression. As a general rule, the urine of obstructive suppression is characterized by being passed in small quantities, of very pale color, and very low specific gravity, and you may or may not find evidence of kidney disease by the microscopical examination of the sediment.

HYSTERECTOMY BY THE PRATT METHOD.

Lanphear (Journal of the American Medical Association, vol. xxii., No. 4) performed the above operation in a case of uterine tumor in which laparotomy disclosed a uterus so enlarged and fixed in the pelvis that it was impossible to remove it by abdominal hysterectomy. The patient was anæsthetized; the perineum and the peritoneal body slit through to give room; the uterine arteries temporarily tied by the method advocated by Dr. F. H. Martin. The tying of the arteries is an innovation of Lanphear's, Dr. Pratt claiming it to be unnecessary. The uterine canal was packed tightly with gauze, then cut with a knife entirely around the cervix through the mucous membrane and the sub-mucous tissue, until the free and loose connective tissue which envelopes the body of the uterus was reached. The fingers were then introduced within the slit and rapidly tore away the uterus and its tumor from the peri-uterine structures. This was rapidly accomplished. Caution should be exercised in approaching the fundus, lest the peritoneum which covers the uterus at this point be penetrated. Very little hæmorrhage occurred. For the removal of the uterus and tumor not more than ten minutes were required. The whole operation, including sewing up of the perineum and packing the cavity with iodoform gauze, can be accomplished within twenty-five minutes.

This operation will probably prove an admirable one for cases of this kind, and it is possible that it is also applicable in cases of early epithelioma of the cervix.

THE IMPORTANCE OF MENSTRUATION IN DETERMINING MENTAL IRRESPONSIBILITY.

Krafft-Ebing (Jahrbüch. für Psych, x., 2, 3) reaches the following conclusions on this subject :

(1) It is useful to consider the mental soundness of women during menstruation from a medico-legal point of view.

(2) It is advisable where a women is held on a criminal charge to ascertain whether the commission of the act coincided with the menstrual period ; and by "period" is meant not only the days when there is actual flowing, but those before and after as well.

(3) It is best to advise examination of the mental condition when such coincidence is established. This is indispensable when there is a personal history of neuropathic defect, of mental disturbance at the time of previous menstrual periods, or when the nature of the act reveals any striking features.

(4) When the menstrual process exerts a powerful influence on the mental life of the subject the accused should be given the benefit of extenuating circumstances in the infliction of the penalty, even although there be no proof of menstrual insanity.

(5) When the offence of crime has, in a person whose mind is impaired, occurred during the menstrual period, she must be declared irresponsible, for there is every reason to think the act due to emotional impulse.

(6) But individuals who by reason of menstrual insanity would benefit by acquittal on this ground should be considered as dangerous in the extreme and subjected during the times of the menses to close surveillance. It is best to confine them to any asylum for the insane where they will be comfortably cared for and often cured of this menstrual instability of mind.

HÆMORRHAGE AFTER ABDOMINAL SECTION.

Buckmaster (Annals Gyn. Et. Ped., May, '94): Certain conclusions have been reached by a careful consideration of the experience of myself and others :

(1) When the abdomen is closed after section the case is closed. No treatment short of that which is aggressively bad will influence the after-result. Nothing, therefore, should be left undone, with the reservation that the case may require reopening. It is often better to run the risk of death from shock than the risk of death from hæmorrhage. Many of the fatal cases were the result of that state of mind which the operator revealed when he said, "I was afraid that the patient would die on the table, and therefore quickly terminated the operation by pressure on the bleeding-points by the gauze drain or sponges."

(2) When symptoms of concealed hæmorrhage are present it is too late to afford the patient more than a forlorn hope.

(3) The use of the drainage-tube to indicate hæmorrhage is not to be relied upon.

(4) It is best, when possible, to enucleate all cases where the hypertrophied broad ligament forms a part of the pedicle.

(5) In cases of suspected hæmorrhage the pelvis should not be elevated, for in this position the blood will gravitate out of the pelvis and collect under the diaphragm, where it is impossible to remove it without eventration. The blood will in many cases set up a peritonitis, and it is this peritonitis which has been blamed for many deaths due primarily to hæmorrhage.

(6) That a patient may have no bleeding in the pelvis when she is in the Trendelenburg posture, because the arterial pressure is diminished ; but when the pelvis is lowered, bleeding of a dangerous character may occur.

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MISCELLANEOUS.

MEDICO-CHIRURGICAL COLLEGE.

The Board of Trustees of the Medico-Chirurgical College has elected the following gentlemen to various chairs in that institution : Dr. Isaac Ott, of Easton, Pa., Professor of Physiology ; Dr. William E. Hughes, Professor of Clinical Medicine ; Dr. Albert E. Roussel, Assistant Professor of Clinical and Practical Medicine; Dr. Charles W. Burr, Clinical Professor of Nervous Diseases; Dr. William C. Hollepeter, Clinical Professor of Diseases of Children; Dr. Arthur H. Cleveland, Clinical Professor of Laryngology; Dr. Edward B. Gleason, Clinical Professor of Otology, and Dr. William Blair Stewart, Lecturer in Therapeutics.

ABUSE AND TOO PROTRACTED USE OF THE BANDAGE.

Dr. T. H. Manley treats of this subject in the Medical Summary, June, 1894, in the following terms:

"The first abuse of the bandage comes through its clumsy, unskilled application, by the inexperienced, hasty or careless, the second, through its too firm adjustment, when the circulation is impeded or, as sometimes happens, it is totally strangulated, the tissues beyond becoming asphyxiated, mortified and destroyed. This latter occurs, most commonly, in cases of fracture. As many as five or six such cases have come under my observation in my time, and I have been informed of others in which the bandage got in its deadly work, though they were frequently entered in the hospital-records as cases of 'acute mortification.' A fractured limb which is at all firmly bandaged, should be closely watched, for the first twenty hours; until, in fact, the subsidence of primary inflammation and swelling and the bandage relaxes its grip. It often becomes a matter of great difficulty to permanently adjust widely separated fragments, without risking a firm bandage to fix them. These difficulties and dangers could be largely obviated if we would go back to the practice of our fathers, and, after carefully adjusting the fracture, leave it alone and not permanently 'set' it until primary swelling has subsided.

"We daily witness the weakening and atrophic muscular changes which a bandage may produce in that fashionable thoracic girth, commonly known as a 'stays' or corset. The maternal binder, after parturition, gives great comfort to the bruised, strained, fatigued abdominal muscles, but when too tightly applied or worn too long is capable of doing mischief. We must then use discrimination, skill and judgment with the roller if we would derive the greatest good from it and avoid the unpleasant consequences to our patients or ourselves, which may attend its injudicious employment."

A TIRED WOMAN'S EPITAPH.

Here lies a poor woman who always was tired,
Who lived in a house where help was not hired.
Her last words on earth were: "Dear friends, I am going
Where washing ain't done, nor sweeping nor sewing.
But everything there is exact to my wishes,
For where they don't eat there's no washing of dishes.
I'll be where loud anthems will always be ringing,
But having no voice I'll get clear of the singing.
Don't mourn for me now, don't mourn for me never,
I'm going to do nothing forever and ever."

[SELECTED].

ODE TO HOMŒOPATHY.

The homœopath fanatic,
With his cant and air ecstatic,
Can dispense his faith and taffy, and dispense with skill and knowledge,
For the man of one idea,
With a creed or panacea,
Has all that's needed now to found a school and run a college.

With aspect semi-clerical,
His sugar pellets spherical
He darkly hints are loaded down with deadly triple-exes.
There's nothing like a fetich
That is palatably sweetish,
With an added charm of poison, for the grannies of both sexes.

His remedies, by decimal
In size infinitesimal,
He doles out to the women-folk of city, farm and village.
Thus practicing with sedulous
Design upon the credulous,
Depending for a livelihood on sugar-coated pillage.

O, gentle Homœopathy,
Join forces with Hydropathy—
A system that has very much in common with your own—
And then with Christian Science
Form a tripartite alliance,
Making such a combination as for Humbug stands alone.

And don't forget the Voodoo,
Who does very much as you do—
That is, the thing he works on is diseased imagination.
True, it is not yet his fashion
To invoke the *bon-bon* passion,
But both might gain effects by joining cant with incantation.

Oh! for a huge milk-shaker
That would cover many an acre,
In which to dump them, one and all, from quack to pious canter.
With Hercules the crank to turn.
The cranks within to mix and churn,
That we might shout. "Similia Similibus Curantur."

—By a "CRANK" in Chicago.

A NOTE ON THE USE OF RUBBER HEELS IN POTT'S DISEASE.

BY JOHN C. SCHAPPS, M.D.,
Surgeon to the Department of Orthopedic Surgery and Diseases of Joints, St. Mary's Hospital, Brooklyn, N. Y.

Read at the Annual Meeting of the American Orthopedic Association, Washington, D.C., May 31, 1894.

The exercise of walking acts not only as a direct traumatism to the diseased spine, but it is also injurious because it involves the expenditure of a large amount of nervous energy in the maintenance of constant muscular spasm as an automatic protection. This spinal rigidity appears to be protective only as against friction. The normal resiliency of the spine being lost, the diseased area is more exposed to concussion and pressure than before. Only in the subacute or convalescent stage should the patient be subjected to the traumatism of weight-bearing, and that of walking, and even then a great amount of bracing is necessary to prevent motion and to diminish reflex muscular spasm. To minimize the concussion of walking, I have, for the last two years, been using heels of soft rubber attached to the shoes. I can report no specific results, but can say in a general way that this simple procedure seems to give considerable relief. The rubber must be soft, containing 65 per cent. or 75 per cent. pure gum. The heels must be attached by cement and stitches, and not by nails, and the stitches must pass through the edge of the rubber and not over the surface, where they would be exposed to wear. The rubber should be one half to three-fourths of an inch thick and have the front edge bevelled off to avoid danger of the patient catching in them and being thrown down. I have recently seen in the market rubber pieces to be attached to leather heels, but they are too thin and too hard for our purpose, and are to be nailed on.

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NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

A TEXT-BOOK OF THE DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D., Professor of Obstetrics in the New York Post-Graduate Medical School and Hospital, etc. Complete in one handsome royal octavo volume of 700 pages. Illustrated with 310 engravings and colored plates. Full and comprehensive index. Prices: Cloth, $4.00; Sheep, $5.00, net. W. B. Saunders, Publisher, No. 925 Walnut Street, Philadelphia.

The salient features of this work are its conciseness and directness. It deals with verities. The author has displayed powers of analysis, concentration and differentiation which give both positiveness and clearness to his teaching. The chapter on embryology and anatomy of the pelvic organs displays his familiarity with and grasp of the subject. The book is admirably adapted to the needs of the student and the practitioner of minor gynæcology, but is somewhat lacking in that fulness and detail which belong to major operative gynæcology. It reflects credit on its author, and will be a welcome accession to the library of all who practice the gynæcological art and to the medical profession of the United States. WALTER B. CHASE.

DISEASES OF THE SKIN; AN OUTLINE OF THE PRINCIPLES AND PRACTICE OF DERMATOLOGY. By Malcolm Morris, F.R.C.S., Surgeon to the Skin Department, St. Mary's Hospital, London, etc. In one 12mo. volume of 572 pages, with 19 chromo-lithographic figures and 17 engravings. Cloth, $3.50. Philadelphia: Lea Brothers & Co., 1894.

We cannot be altogether laudatory to the author on the appearance of this little book; while the volume has merits of its own and many of the articles on the special diseases are tersely and succinctly drawn, we cannot believe that Mr. Morris has altogether done justice to his subject or to his deserved reputation as a dermatologist.

To begin with the book is small; in fact, he recommends it more particularly as a students' manual. We think there are others better adapted both by arrangement and by adoption of the usual classifications for this purpose. As to his remarks, however, on the subject of classification itself, they are worthy of attention.

His chapter on principles of diagnosis is one of the best in the book.

The colored plates and cuts are only mediocre in quality, the print is distinct, the volume small and easily handled, the descriptions of diseases good, the pathologic anatomy given of such is particularly up to time, and there are few or no errata that we can discover. We hope the present volume will serve as a skeleton for a larger work from the same hand. S. SHERWELL.

THE CARE AND FEEDING OF CHILDREN: A CATECHISM FOR THE USE OF MOTHERS AND CHILDREN'S NURSES. By L. Emmett Holt, M.D., Professor of Diseases of Children in the New York Polyclinic, etc. New York: D. Appleton & Co., 1894. Pp. 66. Price, 50 cents.

This little book was prepared as a manual for the instruction of nurses in the Practical Training School for Nursing Maids and, being in the form of question and answer, is admirably adapted for nurses and mothers alike. It treats of the care of children as to bathing, clothing, nursing and weaning; of the various kinds of artificial food and their preparation, and a variety of miscellaneous topics, such as sleep, temperature, the bowels, rooms, contagious diseases, etc., etc. It is a most admirable résumé of what every mother and nurse should know and should be in the hands of every one of them.

The Year Book of Treatment for 1894: A Critical Review for Practitioners of Medicine and Surgery. Philadelphia: Lea Brothers & Co., 1894. Pp. 492. Price, $1.50.

This volume is the tenth of the series, and besides the departments of medicine represented in previous years, we note the addition of those of "Medical Diseases of Children" and "Bacteriology."

The series is too well and favorably known to need more than a reminder to our readers that another volume has appeared. Those wishing to get in a nutshell the most recent practice of the best practitioners will have recourse to the "Year Book."

The following table is of interest as giving the views of the Clinical Society of London on the "Incubation Period of Infectious Fevers."

Disease.	Minimum number of days.	Most usual number of days	Maximum number of days.
Scarlet Fever	1	2	7
Diphtheria	2	2	7
Influenza	1	3	5
Measles	4	10	14
Variola	9	12	14
Enteric Fever	5	12	23
Varicella	13	14	19
Rubeola	8	18	21
Mumps	12	19	25

Sixth Annual Report of the Methodist Episcopal Hospital, for the Year 1893.

The reports of the Methodist Episcopal Hospital have, from the very beginning, been models for other hospitals, and it has always been a surprise to us that some of the older hospitals in our city did not emulate their younger sister. The medical and surgical statistics are not a mass of figures, but sufficient details are given to make the reports exceedingly instructive to their readers. Those who have never studied them will be surprised at the information they contain.

Ophthalmia Neonatorum; Contracting Eyelids; Glaucoma; Grattage for Granular Lids. By L. Webster Fox, M.D., Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia. Reprinted from the Medical Bulletin.

A history of five cases which were treated by Dr. Fox, with excellent results.

History of the Drop Bottle. By L. Webster Fox, M.D. Reprinted from The Ophthalmic Record, May, 1894.

This is an illustrated description of the various drop bottles used in medicine.

Report of the Brooklyn Hospital for the Year 1893.

This is mainly a statistical report, although in addition we find a list of the members of the hospital corporation from the beginning. We have already referred to the new feature of the hospital, the Low Maternity, which has no superior in either city.

NOTE ON THE VALUE OF MACERATION IN ETHER AND IN ETHER-SOLUTION OF CORROSIVE SUBLIMATE FOR THE STERILIZATION OF CATGUT. By Frederick C. Holden, M.D., Resident Obstetrician St. Mary's Maternity Hospital.

The experience of Dr. Holden is that catgut prepared in this manner has decided advantages over that prepared in any other.

SOME SURGICAL THOUGHTS ON APPENDICITIS, FROM A CLINICAL STANDPOINT. By John D. Rushmore, M.D., Professor of Surgery in the Long Island College Hospital, etc. Reprinted from Annals of Surgery, May, 1894.

Prof. Rushmore's experience as visiting surgeon to two of the principal hospitals of Brooklyn, St. Peter's and The Brooklyn Hospital, has led him to the following conclusions in reference to this much-discussed subject:

(1.) Appendicitis is a surgical disease from its beginning.

(2.) Its diagnosis is usually not difficult.

(3.) In doubtful cases exploratory laparotomy is justifiable.

(4.) Appendicectomy, all things considered, offers the best chance, immediate and remote, for the patient.

(5.) The operation should be done at the earliest possible moment.

THE TUBERCULAR DIATHESIS, CONTROLLED BY GOLD AND MANGANESE IN COMBINATION. By J. Blake White, M.D. Reprint from American Medico-Surgical Bulletin, April 1, 1894.

A concise statement of Dr. White's experience with these drugs which is, to say the least, exceedingly encouraging.

ESSENTIALS OF REFRACTION AND THE DISEASES OF THE EYE. By Edward Jackson, A. M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc.; and

ESSENTIALS OF DISEASES OF THE NOSE AND THROAT. By E. B. Gleason, L.B., M.D., Surgeon in Charge of the Nose, Throat and Ear Department of the Northern Dispensary, of Philadelphia. Second edition, revised. 124 illustrations. Philadelphia: W. B. Saunders, 1894. Pp. 290. Price, $1.00.

These monographs constitute No. 14 of Saunders' Question-Compends and have been already noticed. This edition, although containing some new matter, is in the main a repetition of the first.

A MANUAL OF INSKRUCTION IN THE PRINCIPLES OF FIRST AID TO THE INJURED, INCLUDING A CHAPTER ON HYGIENE AND THE DRILL REGULATIONS FOR THE HOSPITAL CORPS, U. S. A. By Alvah H. Doty, M.D., Major and Surgeon, Ninth Regiment, N. G. S. N. Y.

Second edition, revised and enlarged. New York: D. Appleton & Co., 1894. Pp. 304. Price, $1.50.

As the title implies, the object of this manual is to instruct those who are desirous of knowing what course to pursue in emergencies, in order that sick or injured may be temporarily relieved, and special effort has been made to arrange the matter so that it will be of use to the ambulance corps connected with military organizations.

We are glad to see that Dr. Doty believes that it is essential to know something of the construction of the human body and of the function of some of the organs. in order to rationally apply the means of relief, and that he has, therefore, devoted so much space to anatomy and physiology. The book will, we are sure, be found a most useful one.

THE NURSE'S DICTIONARY OF MEDICAL TERMS AND NURSING TREATMENT, COMPILED FOR THE USE OF NURSES. By Honor Morten, author of "Sketches of Hospital Life," etc. Second edition Philadelphia: W. B. Saunders. Pp. 139. Price, $1.00.

A handy pocket dictionary containing descriptions of the principal medical and nursing terms and abbreviations, instruments, drugs, diseases, accidents, treatments, physiological names. operations, food, appliances. etc., etc.. encountered in the ward or sick-room.

INTERNATIONAL CLINICS. Volume I. Fourth Series, 1894. Philadelphia: J. B. Lippincott Company, 1894. Pp. 358. Price, $2.75.

In this volume. the first of the fourth series, we find a vast amount of most interesting and instructive material. The opening article is a memorial of Professor Charcot, by M. Allen Starr. and is accompanied by a portrait of this distinguished French physician.

Of the forty-three papers which compose the volume, it will be impossible to mention more than a few, and these are selected, not because, in our judgment, they are superior to the others, but simply to give our readers an idea of the wide range that the "International Clinics" takes. "The Hand and Tongue in the Diagnosis of Disease," is the title of an article by H. A. Hare, and full of suggestion it is, too. J. Bland Sutton writes on "Simple Neuromata;" American readers have learned to look upon his writings as being the dicta of an authority. Lewis A. Sayre treats of "Potts Disease," and who is more competent in this country or abroad? Alexander J. C. Skene contributes his views of "Ovarian Neoplasms," and his ripe experience fully justifies him in discussing the subject *ex cathedra*. The rest of the articles are on both medical and surgical subjects and are in the main equally well handled with those we have mentioned.

A RETROSPECT OF SURGERY, JANUARY 1890 to JANUARY 1894. Reprinted from "The Montreal Medical Journal." Prepared by Francis J. Shepherd, M.D., C.M., Surgeon to the Montreal General Hospital, etc. Montreal: Gazette Printing Company, 1894. Pp. 259.

The title of this volume sufficiently indicates what it is: a reproduction of the abstracts of surgery which have appeared in the "Montreal Medical Journal." It is a convenient reference book for surgeons who have occasion to review the progress of surgery during the past few years.

TEXT-BOOK OF MEDICAL CHEMISTRY FOR MEDICAL AND PHARMACEUTICAL STUDENTS AND PRACTITIONERS. By Elias H. Bartley, B.S., M.D., Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, in Long Island College Hospital; Dean and Professor of Organic Chemistry in the Brooklyn College of Pharmacy, etc. Third edition, revised and enlarged, with 84 illustrations. Philadelphia, P. Blakiston, Son & Co., 1894, pp. 684.

Bartley's Medical Chemistry has been a recognized text-book since the first edition appeared in 1885. At that time the author's twelve years' experience as a teacher of chemistry had abundantly satisfied him that the complaint of students that the various text-books on chemistry were either too voluminous or too elementary, was well-founded and it was to meet an evident want that his manual was prepared. The cordial reception which it received must have satisfied him that he was not mistaken in his estimate of what medical students needed. Since that time more of chemical knowledge has been demanded of both medical and pharmaceutical students, and it has, therefore, become necessary to greatly enlarge such text books as are used by them. To keep abreast of the times it has been obligatory upon the author of the volume before us to rewrite the whole work, and in this so-called "third edition," we have to all intents and purposes, an entirely new book.

The new matter consists of a description of a large number of the new synthetical compounds, tables of analytical tests, and a chapter on physiological and clinical chemistry, dealing with the chemistry of nutrition, foods, digestion, milk, and the urine. This chapter we regard as one of the most valuable in the book, and full of instruction for the practitioner as well as the student. It gives the principles of feeding and diet, the clinical examination of stomach digestion for diagnostic purposes, the easier methods for the examination of milk, and a sufficiently complete guide to the clinical examination of urine and urinary calculi.

Taken as a whole we regard this text-book as the best on the subjects of which it treats, and unless we are much mistaken the time is not far distant when we shall be called upon to notice the fourth edition.

ESSENTIALS OF NERVOUS DISEASES AND INSANITY; THEIR SYMPTOMS AND TREATMENT. A MANUAL FOR STUDENTS AND PRACTITIONERS. By John C. Shaw, M.D., Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital, etc. Second edition, revised, 48 original illustrations, mostly selected from the author's private practice. Philadelphia, W. B. Saunders, 1894, pp. 194. Price $1.00.

So short a time has elapsed since the first edition was issued, less than two years, that the author has not found it necessary to change the statements therein made, nor have there been new facts discovered of such importance as to require their mention in a manual which is intended as a primer for advanced students, and not to take the place of the larger and more complete works of Ross and Gowers.

General practitioners who do not claim to be specialists, but who at the same time wish to keep informed on the essential facts of neurological science, will find no work in which this knowledge is more concisely and plainly given than it is in Prof. Shaw's "Essentials."

THE REVIEWER REVIEWED.

The *London Lancet* sometime since contained a review of the second edition of Dr. Skene's book on Diseases of Women, which is so remarkable that one may be pardoned for briefly reviewing the reviewer.

The first sentence of this review may be taken as a sample of the whole; it reads as follows: "Although the number of pages in this edition is almost the same as in the first, the author has managed to incorporate much additional matter by considerably enlarging the size of the page." This is rather a bad beginning for the review because it is absolutely incorrect. The pages in the second edition are exactly the same size as in the first.

The reviewer next finds fault with tke author's views in regard to flexion of the uterus and its effect upon the circulation of that organ. In this the reviewer has some cause for criticism, because the views of the author on this subject agree with those of about one-half of the British authorities, and of necessity disagree with the others. Evidently the reviewer belongs to the latter. However, he is hardly justified in the following remark: "The author does not seem to be acquainted with Dr. John Williams' well-known and convincing paper on the latter of these two questions." The author believes he has read everything that Dr. John Williams has ever written, the paper referred to included, and yet has failed to be convinced that a malformation of the uterus will not impair its circulation; for he has taken the time and trouble to demonstrate the fact that it does, and when he makes this assertion he is satisfied that he agrees with English authorities who are as worthy of confidence as Dr. John Williams, or the reviewer.

The next criticism of the reviewer appears to be intended as a little witticism, and if it were good wit we would be willing to pass it by without comment, but as it is neither good sense nor good nonsense, we must beg leave to call attention to it. Here it is as the reviewer gives it: "Again it seems to us that Dr. Skene makes too little allowance for the individual variations in form that should be classed within the limits of normal. For example, as regards the projection of the vaginal portion of the cervix, if it projects too much we find an operation is recommended to shorten it, and if it projects too little an operation is to be undertaken to lengthen it. Surely it would be as reasonable to set up an exact pattern, for instance, for the nose and to operate on all noses that differed from the author's ideal." It is difficult to deal with such a criticism as this because one is at a loss to know whether to take it seriously or not. The author believes, and has so put it down in his book, that when the invagination of the cervix uteri is abnormal, and is a cause of impairment of function, such as sterility or dysmenorrhœa, the malformation should be corrected by surgical means. This principle of surgery was laid down by Marion Sims many years ago and has been accepted, we believe, by some of the best English authorities; at least this is the fact so far as regards the abnormal elongation of the infravaginal portion of the cervix, and the author has devised and commended an ophration for the relief of incomplete invagination of the cervix. Practically it has been found that this operation affords perfect relief from the suffering which not infrequently arises from this malformation. To borrow a simile from the reviewer, one might say that it is quite reasonable to set up an exact pattern, for instance, for the nose, and to operate upon all noses that differ from the ideal or useful nose. This we believe would be good surgery; if a nose is deformed and does not perform the function of a nose properly, the surgeon ought to operate, if by so doing he can contribute to the usefulness of said nose. Indeed it appears to be a fact that the rhinologists both in England and America do just this kind of surgery. We believe that one of the most celebrated of these specialists in England was knighted for just such work.

Moreover the reviewer finds fault with the space given to the discussion of malignant diseases of the uterus. This is a reasonable criticism, but the author gave all the space that he could give without crowding out other material that he deemed of equal or greater importance. The difference here between the author and reviewer is simply one of judgment.

The reviewer also severely criticises Dr. Skene's description of supravaginal amputation of the cervix-uteri. The author pleads guilty to this count. His description of the operation is incorrect and not by any means clear. The reviewer, however, doubts if the author has had any personal experience in this operation. The author can at once relieve him from doubt on this point by stating that he has performed the operation a number of times, but much prefers to do so with the galvano-cautery rather than the knife, because the results obtained are infinitely more beneficial. This has been amply demonstrated by Dr. John Byrne, of Brooklyn, whose experience in this operation is probably larger than that of any other living man.

In reviewing the portion of the work devoted to diseases of the urinary organs, the reviewer makes the following quite unfair statement: "The author refers somewhat contemptously to English literature as containing little information on this subject; we think, however, we could supply a fairly long list of references as to where such information may be obtained." This statement is devoid of fact and eminently unfair. As the author belongs to an English-speaking nation, he naturally has the most profound respect for all English-speaking people, including the English. He is entirely incapable of the shadow of a contemptous thought, much less "word or deed," for English literature, of anything good that is English. At the time the author wrote on this subject almost everything on the subject of diseases of the urinary organs of women was limited to German and French literature, and to-day there is very little in English medical literature on this subject that cannot be traced to Germany, France or America.

In referring to the illustrative cases found in the work in question the reviewer says: "The most interesting are those giving a clinical account of some of Dr. Keith's hysterectomies for fibroids." Here the reviewer and the author are entirely in accord. The author feels that these cases of Keith's are the most interesting contributions to gynæcology that have ever emanated from Great Britain.

Again, the reviewer is evidently disturbed by the fact that he is "unable to find any account of so common an affection as mucous polypus of the uterus." But, to borrow a little of style and method from the reviewer, we might retort mildly by saying that the author said nothing about mucous polypus, because he has never seen or heard of a polypus that was composed of mucus, and of course could not be expected to describe what he did not believe to exist.

Perhaps the reviewer shows himself in the most ridiculous light when he undertakes to criticise the spelling in the work. He says: "The American system of spelling is of course that adopted throughout the book; we are not quite sure, however, whether or not 'sirup' is good American for 'syrup.'" We regret very much that the reviewer did not write the above sentence so as to make his meaning perfectly clear; but if we are not mistaken he means to have his readers understand that the author spelled the word "sirup" with "i," when he should have spelled it with 'y.' Unfortunately he does not give us a reference to the page of the book in which the word is used, and we have been unable to find it. We think, however, that even your reviewer, on sober second thought, will acknowledge that we are making a charge which is not unjustifiable, when we call him not only hypercritical, but also incorrect. Let us see what the recognized authorities have to say about the spelling of this word.

Worcester, in the 1883 edition of his Dictionary, says: "This word is spelt *syrup* by Kersey, Baily and Martin; and *sirup* by Johnson, and the later English lexicographers; yet it is now, perhaps, more commonly written *syrup*, as it is spelt by the P. Cycl. and by Dunglison."

In the American Dictionary of the English Language by Noah Webster, we find under "sirup," the following note: "This word is spelt *sirup* in most of the English dictionaries, but *syrup* is the form in common use. See Syrup." On turning to syrup, we find: see *sirup*, the preferable, but perhaps less usual, orthography."

In the Century Dictionary we find both *syrup* and *sirup* given.

Your reviewer will, I think, acknowledge that the authority of Worcester, Webster and the Century is sufficient to make *sirup* at least "good American."

But we are not satisfied with this: we desire to convince him that *sirup* is also good English. Webster says that "this word is spelt *sirup* in most of the English dictionaries." Now it may be that your reviewer never heard of Webster or his dictionary, or if he has, may regard them both as too American to be recognized as authority. Does he know of John Ogilvie or of his Imperial Dictionary of the English Language? If so, does he regard either as authority? In the preface to his dictionary Ogilvie says: "Webster's Dictionary, which forms the basis of the present work, is acknowledged both in this country and in America to be not only superior to either of the two former (Johnson & Richardson) but to every other dictionary hitherto published. It is more copious in its vocabulary, more correct in its definitions, more comprehensive in its plan, and in the etymological department it stands unrivalled." This same Webster, of whom Ogilvie spoke so highly, quotes the following from the distinguished poet Keats, who can hardly be charged with having been an American: "Lucent *sirups* tinct with cinnamon." Worcester, too, speaks of *sirup* as being thus spelt by "the later English lexicographers," and makes the following quotation from one whose works Americans delight to read, and whom they would be more than proud to call a countryman—Shakespeare:

> "Not poppy, nor mandragora,
> Nor all the drowsy *sirups* of the world."

But your reviewer may reject the American authorities altogether, and even claim that Shakespeare and Keats are not authorities as to modern spelling, whatever they may have been in their day and generation. Let us, then, look at two authorities which we think even the English people are accustomed to respect.

In the Imperial Dictionary of the English language, by John Ogilvie, "new edition carefully revised by Charles Annandale, A.M., London, Blackie & Son, etc." we find "*sirup*, as syrup," and the same quotation from Keats about "Lucent *sirups*, etc." And in Stormonth we find "*sirup*, more usually spelt syrup."

The dictionaries thus quoted are all that are at hand for reference, and we leave it to your readers to decide whether *sirup* is not both good American and good English.

PH. PINEL.

JOHN PRINGLE.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

THE PROPHYLAXIS OF ABORTION.

BY JAMES L. KORTRIGHT, M.D.

Read before the Brooklyn Gynæcological Society, March 2d, 1894.

Of recent years, we have heard a great deal about the proper management of cases of abortion, and many new instruments have been invented and ingenious schemes have been devised to empty completely the uterus of its products of conception. But the study of the causes that lead to abortion and their correction and cure has not received as much attention as its importance requires. For instance, a recent admirable work on therapeutics devotes two pages to the treatment of inevitable abortion, five lines to the treatment of threatened abortion, and says nothing whatever upon our subject. This lack of attention is consequent upon the loose views regarding the gravity of abortion that prevail among the laity and to a certain extent among the profession, as the following incident will show. Recently there came to me a young married woman suffering from dysmenorrhœa. Examination revealed retroversion and catarrhal endometritis. When I told her that she would probably conceive easily, and abort still more easily, she immediately exclaimed "Isn't that nice," and declined further treatment. A recent writer in a medical journal has openly advocated the practice of breaking up pregnancy for comparatively slight causes, taking the ground that all physicians are, in secret, abortionists, and that it is now high time to be frank with our patients as well as accommodating to them. I deny that all or even many of us are guilty of the charge that he brings; but his attitude substantiates my position that to some extent physicians do not look at the subject of abortion in its proper light.

An abortion is not a simple solution of the Malthusian problem, as some would have us believe; but rather a thing to be deplored and to prevent which we should strive with all our might. By it a potential life is lost and the State is deprived of the services and productiveness of that life.

The dictates of political economy and humanitarianism prompt alike the education of children, the preservation of the lives of infants, and the punishment and prevention of antenatal murder. Nothing conserves the family so much as the rearing of children, and to preserve the family is to protect the State. Those nations are strongest in which abortion is rare and criminal abortion is unknown. Again, children form the strongest ties that bind husband and wife; and their production and care are the best means of development of the characters of parents. Hence childless marriages are to be deplored, and when in consequence of choice are to be condemned. It rests with the medical faculty to teach the public right feeling in this respect. Wives should be taught the dangers of miscarriage and the importance of pelvic health. Husbands should be made to understand how much their future happiness may depend upon the begetting of healthy and vigorous children.

Out of one hundred women that miscarry (and this does not mean out of one hundred miscarriages) twenty-two will remain sterile; and of these, fourteen will have painful and incurable pelvic disease, and eight will not suffer, but will be barren. These are the figures of Napier, of London. 18.6 per cent of the women who miscarry are habitual aborters. These women often display marvellous fecundity. As many as thirty-three miscarriages have occurred in the same patient. Repeated abortions occur commonly either at the beginning or at the end of the child-bearing period. When occurring soon after marriage, they indicate lack of development of the sexual organs. When occurring late in life, they indicate exhaustion of the power of reproduction. Single abortions occur either soon after marriage or during the course of child-bearing. They indicate rather disease of the reproductive organs.

So numerous and so present are the causes of abortion that almost all fruitful women have miscarried at least once. Miscarriages are due to the errors in the father, in the child, or in the mother.

When the cause is of paternal origin, it is in most cases either syphilis or too much sexual indulgence.

Very little is known regarding the diseases of the fœtus and its membranes that lead to its death and premature escape from the uterus. Dropsy of the chorion ; hypertrophy and villous degeneration of the chorion ; fibro-lipomatous degeneration of the placenta ; hæmorrhage into the placenta, from large branches of the umbilical vein ; stenosis of the umbilical vessels ; calcareous and syphilitic degeneration of the placenta ; hydrocephalus ; these complete the list of causes acting from the fœtal side. I would respectfully urge the members of this society to save all the products of abortion for microscopical examination. In this way, our society may add to the stock of our knowledge of this very obscure subject.

When abortion is due to the mother, it is either traumatic or pathological. Women are often most cruel to themselves in their endeavors to get rid of a fertilized ovum. They will dare anything and undergo any torture to obtain relief from their condition. A colleague recently made an autopsy upon the body of a woman dead of peritonitis who had introduced some foreign implement into her womb. She had not even been pregnant, but had killed herself on suspicion. This experience cannot be of very infrequent occurrence, for I have too seen in consultation within the past month a case exactly similar to the one related.

Just at present the soft bougie seems to be the favorite instrument, and they are on sale, presumably for this purpose, in at least one of our large dry goods stores for 20 cents each.

A few words as to the mechanism of abortion may not be out of place here. The deepest layer of the decidua is composed of interlacing fibres with blood vessels and the blind extremities of the utricular glands. This is the spongy layer of the decidua, or, as Berry Hart calls it, the postage stamp layer. Here it is that separation takes place when abortion occurs. If the membranes be ruptured and the fœtal sac collapse, the decreased internal pressure permits a hæmorrhage into this layer. Or from increased blood pressure, or from weakness of its wall, a vessel in this layer may burst and a corresponding hæmorrhage occur. The effused blood, in either case, separates the ovum from the mother; and the uterus now containing a foreign body, expels its contents. This mechanism, although simply expressed, is sufficiently accurate for this occasion.

It is a truism that a healthy uterus will not cast off the product of conception, but will nourish it until it is ripe for birth. A woman with a healthy endometrium and a stabile nervous system will pass through the severest accident and still preserve her uterine contents intact. But if the endometrium be unhealthy—if the blood vessels have thin walls characteristic of proliferating tissue—or if they present obliterating endarteritis, as in tissue undergoing atrophy, then an apparently trifling accident may so disturb the balance of circulation that blood will be effused into the reticulated layer and miscarriage will ensue. Hence anything that causes disease of the endometrium may serve as a cause of abortion. The uterine mucous membrane may be inflamed in consequence of a septic infection at a previous labor, from a displaced uterus, from an everted cervical tear. The uterine mucous membrane may be badly nourished in consequence of the dyscrasiæ, cancer, syphilis, malaria, albuminuria, lead poisoning, leucocythæmia, anæmia. It may be engorged by heart disease, hepatic cirrhosis, too frequent cohabitation, lactation.

It matters not what the cause may be, the mechanism and the effect are the same. Nevertheless, our success in treating the condition depends upon an exact appreciation of the cause of the endometritis. I understand the great underlying principle of the treatment of endometritis to be thorough drainage. The mere continuous removal of the diseased secretion as fast as formed is a long step toward the cure. It is chiefly for this purpose that we make applications to the uterine cavity, or dilate it or curette it and pack it with gauze. If a moderate salpingitis be associated with the endometritis, the treatment would be the same. Such local treatment, of course, should antedate impregnation.

Displacements should be corrected. Coe, of New York, has had success by the use of the pessary. In general it may be said that flexions of the uterus produce sterility, and retroversion predisposes to miscarriage. When the uterus fills the pelvic cavity and is about to rise into the abdomen is the time of greatest danger. At this period the patient should remain in bed for at least four weeks and place herself in the knee-chest position repeatedly during the day.

The febrile state is especially inimical to the life of the fœtus. For example, women suffering from acute pneumonia nearly always abort. Fruitnight has noted a special tendency to miscarriage in influenza. In fever, there is a combination of disordered blood tension, increase of excrementitious and toxic principles in the blood current, and decrease of nutrient pabulum for the fœtus. In addition, many of the medicinal antipyretics are distinctly oxytocic in their action. Hence we must quickly reduce the temperature of our pregnant patients and by non-medicinal means, *i.e.*, by baths and sponging.

The constitutional prophylactic treatment should not be neglected and in some respects is of more importance than the local treatment; especially since when pregnancy has once begun the latter must be interdicted. Even in cases not known to be syphilitic, a course of mercurials is usually of value. In cases of albuminuria, a long course of iron as the tincture of its chloride has been of great service. Sir James Y. Simpson has praised very highly the daily administration of a drachm of chlorate of potash. I have recently tried it in a proper case with an apparently good result. While giving the drug, however, its effect upon the kidney should be carefully watched. The bowels should be moved daily. It is of greatest importance properly to regulate this function, as an overloaded rectum or sigmoid flexure causes uterine congestion and predisposes to abortion. But drastic purges should be avoided as well as those drugs that tetanize unstriped muscular fibre. Violent exercise should be forbidden, especially such as would cause sudden jarring of the uterus, or determine blood to the pelvis. There is a great deal of truth in the common idea that a pregnant woman should not reach over her head. Sexual congress may be allowed in moderation unless the woman is hyperæsthetic. At the time of the menstrual period the patient should remain in bed for at least six days until after the fifth month. The bed should not be too warm or too soft. If the woman is nursing, the child, of course, should be taken from the breast. In short, the whole subject of the constitutional prophylaxis resolves itself into a rigid regard for the hygiene of pregnancy.

Upon the subject of symptomatic treatment, it may be said that unless there is great pruritis of the vulva, vaginal douches would best be forbidden. If bleeding occur from cervical granulation, a few applications of iodized phenol will cause it to cease. If hæmorrhage appear from within the uterus, the two drugs of greatest utility are morphine and viburnum prunifolium. Vaginal tamponade is often useful in this condition, and ergot is often successfully used without causing miscarriage.

There is a class of cases in which from progressive fatty degeneration of the placenta, the child dies of inanition toward the close of pregnancy and after it has been viable. Such patients require the induction of premature labor before the death of the fœtus and yet as late in the pregnancy as possible.

By pursuing the treatment that has been described and adapting it to the exigencies of each particular case, we will be enabled to prevent many miscarriages. Naphey has cured seventy-seven per cent. of women who had even habitually aborted so that they afterward bore children. To prevent miscarriages is to gain the lasting respect and confidence of our patients, even if our success should be a source of temporary disappointment to them. We will furthermore have the consciousness of having saved human lives as truly as if we had achieved wonders in surgery or performed miracles in therapeutics. Finally, to recapitulate, I have endeavored in this paper to show the serious aspect of abortion and especially of the aborting habit, to classify the apparently dissimilar causes of abortion, to explain simply its complicated pathological process, and to bring afresh to your memories well recognized and successful lines of treatment.

DISCUSSION.

Dr. Kortright: There is possibly one exception to the statement that abortion is harmful in all cases. If you take families with a number of children you will be struck by this fact, that where the mother has never miscarried before the birth of her first child, the first child is not as strong as the others. So when I find one of my young married women miscarrying I do not feel so sorry about it as I might.

Dr. Chase: Mr. President, I do not know that I have very much to say in this connection. I have been instructed in listening to the paper of Dr. Kortright, and the manner in which he has enforced his arguments must, I think, impress upon us the fact that there is something left for us to do on the moral side of the question.

Just at the close of the doctor's paper, there was a statement which I would be obliged to him if he would repeat, which I want to consider—regarding the question of healthful women as relating to abortion or premature labor in the first pregnancy.

Dr. Jewett: A point of interest would be the ages at which these first births took place.

Dr. Chase: If I understand it, the inference of Dr. Kortright's paper is this. that on the whole it is fortunate if a woman shall have had one miscarriage, as regards, at least, her oldest living child?

Dr. Kortright: Yes, sir.

Dr. Chase: I cannot question the accuracy of the doctor's statement, and while I have no records to refer to at this moment, from cases I can recollect I am quite certain the experience that I have had does not corroborate his theory. I have yet to learn from any authentic source that the rule is that the first children in any family are not as healthy as those which succeed them; and yet the observation of the Doctor is valuable, for it raises a question which, carefully followed up, may throw light on some questions of heredity which have not been discussed or considered, and doubtless this will suggest observation on the part of others, and good will come from it.

Dr. F. Baldwin: I wish the Doctor had enlightened us more with regard to the treatment of miscarriage when the first evidences have begun. We have all experienced the tantalization of attending a case where it is uncertain whether the contents of the uterus should be retained or taken out.

Dr. McNaughton: If the Doctor's observations as regards the first child are supported by a larger investigation, the question of including miscarriage in the first pregnancy might come up in this age of progression, so as to get things in proper shape for the next one.

I have had the most trouble in preventing miscarriage in cases of ante-flexion, in uteri so ante-flexed that it would seem almost impossible for them to become impregnated. These women, when they do become pregnant, are very apt to abort at perhaps the sixth week, and then the time of the next pregnancy is carried to twelve weeks, and finally after half-a-dozen or less miscarriages they succeed in retaining the fœtus; those cases always give a history of dysmenorrhœa.

I have seen a case of threatened miscarriage in which the membranes presented considerably through the canal. I replaced them carefully and put in a tampon; that case went on to full term. I do not know that this is of common occurrence; to me it was unique, tamponing the vagina, putting her in bed, and giving opiates, for she had pain; the membranes were presenting from the os to a considerable extent.

I have seen cases of pregnancy occurring in a retroverted uterus, probably retroflexed before the pregnancy, in which the knee-chest position was used nearly every day, and occasionally efforts were made to restore the retroverted uterus. I think this is one of the most important subjects we have had before the meeting, and I am much obliged to the Doctor for presenting it.

Dr. L. G. Baldwin : I would like to say a word in regard to miscarriage from posterior displacements. I think as a rule we are apt to be afraid to interfere with the pregnant uterus, perhaps more so than is justifiable. Certainly in a good many cases of posterior displacement, retroversion or retroflexion, by the use of a tampon the uterus can oftentimes be raised so that the patient may go on to full term. I have two cases at the present time six months pregnant ; one has miscarried three and the other four times, and by tamponing the vagina and keeping the tampon in almost constantly after I was aware of the pregnancy, I succeeded in raising the uterus, and was pretty sure it was due to my treatment. I kept it up until the fundus raised above the promontory.

Dr. A. Ross Matheson : I have been very much interested in Dr. Kortright's paper, although my personal experience has been the very reverse of his.

My recollection of my own obstetric work, without any notes or other data to refer to, would indicate that the eldest child with scarcely an exception, is the healthy, strong member of the family.

In reference to miscarriage, I have recently had the satisfaction of delivering a patient at full term, who had miscarried a great many times. She was very anxious to give birth to a living child.

She had a retroflexed uterus which was probably an exciting cause. I had her occupy the recumbent position the greater portion of the second and third months, used cotton tampons as Dr. Baldwin has described, kept up judicious treatment in other respects, keeping the bowels well regulated, using cold douches and care in the direction of her food, and she has been delivered of a living child in good health and good condition.

Dr. Jewett : The question which Dr. Kortright has raised is an interesting one, but it will require a good deal of research to establish the position he has taken, since the question is a complicated one. I would be more disposed to think that the cause of miscarriage in the cases referred to is disease of the pelvic organs, rather than lack of development. It does not seem probable that the woman is not fully enough developed to carry the child, at the age of eighteen or twenty years, which is a common age for the first child-birth. The child of a mother at twenty ought to be as vigorous as one born after thirty-six or forty years of age.

I think common experience will bear out the statement that the children of old parents have less physical vigor than those of younger parentage.

With regard to the treatment of threatened abortion, the methods which the doctor has mentioned certainly cover all that we can do. Rest and means to keep the uterus quiet, particularly during the menstrual dates and at the danger period, are the main reliance.

Replacement of a retroverted uterus is in order and should be attempted. Persistent retroversion is, of course, inconsistent with continuance of the pregnancy beyond about the third month. Yet nature sometimes overcomes the difficulty.

I read a case in which pregnancy occurred in a uterus which was retroverted and bound down. The adhesions were so firm that a competent gynæcologist who had treated the patient could not reposit the uterus. When I was called to her during the miscarriage, at the end of the third month, I found the uterus in its proper position ; the adhesions had been broken up as the organs developed. Yet the disturbance was so great that the uterus emptied itself.

With regard to the fœtus as a cause of abortion, the whole subject of fœtal pathology is one that has not been as yet so fully studied as it deserves. There is a great deal to be learned about intra-uterine disease in the fœtus, and it is a profitable subject for study.

Dr. Ballantyne, of Edinburgh, has published one volume of a work on this subject, and another is forthcoming. He outlines certain methods for the investigation of these cases, which include the family history of both parents, and all facts relating to the pregnancy as well as the examination of the products of abortion. The suggestion that Dr. Kortright has made in the paper, that such specimens should be preserved and studied, is a good one, if the study is done by competent men. Dr. Van Cott has become interested in this matter and would be glad to receive contributions of material.

Dr. McNaughton: Has Dr. Jewett seen a threatened miscarriage arrested when the membranes presented at the os?

Dr. Jewett: I never met a case of that kind in which the attempt at abortion had gone so far as that. As a rule, when the membranes protrude through the cervix or there is dilatation of the cervix to any extent, abortion is inevitable.

Dr. Chase: What date was that in the pregnancy, early or late?

Dr. McNaughton: I think it was about the fourth month.

Dr. F. Baldwin: I want to say a word in regard to preventing miscarriage when the hæmorrhage perhaps has already begun. The ordinary method is to give opium in pretty large doses. I find that small hypodermic injections in the abdomen are more valuable because these large amounts of opium certainly produce vomiting; through some reflex or mechanical influence on the uterus, it tends to carry on the miscarriage which has begun. But by giving small hypodermic injections in the abdomen that danger is overcome. I have had better results since resorting to that method, giving perhaps one-twelfth to one-eighth of a grain of morphine.

Dr. McNaughton: I have found codeia more satisfactory.

Dr. Matheson: In reference to the membranes presenting, I had such a case a good many years ago, which Dr. Skene may remember. The patient was nearly at the fifth month of utero-gestation, and for a number of days had a very severe hæmorrhage. The os was dilated to a considerable extent. I recollect that I remained with the patient several hours, thinking that a miscarriage would occur, and yet she went to full term and delivered a living child.

I presume all physicians will agree that a very common cause of pelvic disease is abortion, and yet I am sure that in practically all cases in which abortion leaves any great mischief behind it is due to the fact that it has not been properly managed.

A woman who carries necrotic material in the uterine cavity for three or four days, is exposed to the dangers of endometritis, salpingitis and their consequences. The troubles following abortion are due to the fact that the ovum or parts of it are left to putrefy in the uterine cavity. If these cases were so treated as to prevent sepsis, the woman should get up as well as from a normal labor. If you interfere in the uterine cavity while the tissues are all fresh you should escape sepsis, but when you have to operate in the presence of putrefying products of conception, it is difficult to leave it clean.

My own treatment is very different from that of our President. It is very difficult in the kind of patients I meet to obtain proper antiseptic surroundings. To illustrate my meaning let me recite this history:

I was called last Monday to a woman who was extremely repentant. She was two months gone, her husband was out of work, and four days before while she was putting up curtains standing on a chair, she jumped off the chair six times. Her temperature was 102 degrees. Her abdomen was tender and tympanitic with sweating and all the signs of septic infection. I had a fresh cut on my finger, and hence did not even examine her, but told her not to be alarmed, that she would soon be all right. I prescribed an anti-septic vaginal douche and quinine. Afterward she passed an offensive mass of blood clot and decidua and in another day was convalescent. In my experience I have had much better results by leaving the uterus alone than by curetting it, although, I suppose, the most approved treatment is to empty the uterus by means of the curette and wash it out.

Dr. Jewett: If the uterus is let entirely alone I can see how it is possible that a woman may sometimes conduct her own miscarriage with as much safety as when there is instrumental interference, for we know the statistics of interference and non-interference in the passages during labor. But if there is any possibility that the cavity has become infected, then early and complete evacuation is demanded.

Dr. Kortright: In consultation I have seen a good many serious and long-continued cases of septic infection that I felt confident were due to attempted curettings not complete or thorough in their antiseptic details.

Dr. McNaughton: Probably this discussion is a little out of order, Mr. Chairman, but I would like to say that one of your students, a young physician, made use of an injection of sterilized glycerine in a case after miscarriage, where such a condition existed as the Doctor speaks of, and he told me within an hour a mass of clots and material came away, very much to his surprise and gratification, as he had done nothing but inject the glycerine into the uterus for the purpose of inducing contraction of that organ.

Dr. Jewett: For a man who has not had some experience in pelvic surgery, of the obstetric sort at least, it may perhaps be safer in many cases to trust the matter to nature; and yet there is a good deal more safety in what really ought to be done.

Dr. Kortright: I wish to thank the gentlemen for their criticism and to say that the scope of this paper did not include really the treatment of what you might call threatened abortion, except in the most general terms.

I quite agree with Dr. McNaughton about the cases of anteflexion of the uterus that miscarry; but, as I said, anteflexion or anterior displacement tends more to sterility than to miscarriage, because, as you know, anteflexion is considered to be lack of proper uterine development. I think I am borne out in that statement.

A great many women have been saved in the way that Drs. Baldwin and Matheson have mentioned, in cases of retroversion that miscarry. I had one who had miscarried nine times, and in her case I had to replace the uterus almost daily for a number of weeks.

In regard to miscarriage at the first pregnancy, I would propose that we make a collective investigation during the coming month in this way:

In the first place to define vigor. Lack of vigor is shown in the first place by the lack of power to resist disease and maintain life with proper development and ordinarily good expectancy of life—such as the life insurance companies consider a good risk.

Second, we should take the age of the first pregnancy. It is undoubtedly true that the children of aged parents are very much lacking in vigor, compared with those of younger parents. I did not mean to say anything different, but you will be surprised by the way that the first child of the family very often is more sickly than the second, third or fourth, before the advancing age of the parents shows in the latter children.

So I wish the members of the Society would take the families they have been treating for a number of years, and make a record of the age of the mother, the first pregnancy. whether full term, whether that child lived, and the number of subsequent children, and as near as possible whether that first child is as vigorous as the others. There will be many exceptions, but I think we can come to some satisfactory conclusion regarding that matter by taking several hundred families, and I believe the first child will not be found to be as vigorous as the second or third, where there has been no previous miscarriage on the part of the mother.

The Chair suggests that the question raised by Dr. Kortright be made the subject of a collective investigation by the members of the Society for report at the next meeting.

Resolution in accordance with the above adopted.

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A CASE OF PELVIC ABSCESS.

BY WALTER B. CHASE, M. D.

Dr. Wm. M. Hutchinson, of this city, referred to me Mrs. W., aged forty-three, the mother of several children, the youngest being about one year old. She had for several days been under the care of another practitioner, who had been treating her for some digestive trouble. Her illness dated from a period three weeks earlier. and she had complained most of pelvic pain and rectal tenesmus. When I saw her there was no fever, no abdominal swelling, but moderate tenderness, much increased on external pressure, with frequent desire to go to stool.

A study of the history of the case elicited the fact of constipation extending over several days, and on making a vaginal examination I found the rectum distended. I ordered a saline cathartic, and after a thorough evacuation of the alimentary canal she experienced great and almost entire relief. The bowels were kept in a soluble condition, but after three or four days the pain returned. Bi-manual examination revealed tenderness and some fullness in Douglas' cul-de-sac. The pain gradually increased until it was very severe, and the swelling increased until the uterus was carried forward to the symphysis pubis. There was no daily rise of temperature, though at times it was found a half to one degree above normal. Once she said she had felt slightly chilly, and there was entire absence of shock, neither was the strength of the patient materially impaired. The accumulation was elastic and seemed deeply fluctuating. There was no attainable history of previous pelvic disease and the examination, so far as it could be carried, revealed no disease of tubes, or solid or cystic disease of the pelvic cavity. What was the accumulation, blood or pus? Certainly not blood in the pelvic cavity, for it could not displace the uterus forward. The progressive and rapid accumulation extending over four or five days was certainly suggestive of post peritoneal hæmorrhage, but with this there was no symptom of shock or depression. On the other hand the almost entire absence of fever and chills tended to discredit the view of pus formation. At this time she was seen by a professional friend, whose opinion was entitled to weight, who favored the theory that the trouble was hæmorrhagic; but notwithstanding the indication which pointed in that direction, I adhered to the opinion, which I had previously entertained, that we had to deal with pus in the cellular structure of Douglas' cul-de-sac.

To settle the diagnosis a sterilized aspirating needle was introduced, showing the contents of the tumor to be pus. Without withdrawing the needle fifteen ounces of healthy pus was taken; the tumor had shrunken to about one fifth its previous size, the uterus had returned nearly to its normal position. The temperature on the morning and evening of this day was normal. No effort was made to irrigate the abscess cavity, as it was confidently expected the sac would refill, when evacuation and drainage would have to be instituted. Happily this expectation was not realized. The patient was kept quietly in bed for a period of three weeks, at which time the only trace remaining was some slight thickening of the cellular structure posterior to the uterus. I saw her during April last and she had suffered no return of the trouble. That this was not due to suppurative disease of the tubes, ovaries or of a parovarian cyst I am perfectly confident, notwithstanding the teaching of some advanced gynæcologists that such condition always arise from these causes. To designate positively the cause of this abscess in this locality would be impossible. This is not the first case of recovery following a simple aspiration of pus in the cellular structures surrounding the uterus, though results like these are possibly the exception rather than the rule.

It is, therefore, well to remember in these times, when some teach that every case of pus in the pelvic cavity demands immediate cœleotomy, that there are cases in which satisfactory results follow the use of less heroic measures without endangering the safety of the patient.

HOW LONG HAS SYMPHYSEOTOMY BEEN INTRODUCED INTO AMERICA?

BY ROBERT P. HARRIS, A.M., M.D.,
Philadelphia.

This is not a question of very great importance; but just now it has a bearing in a case of contested priority, which has gone so far that one of the claimants is believed by many to have made up his report without any case. It is one thing to *believe*, and another to *know* beyond question. I have every reason to believe that Dr. Coggin operated as he has claimed, and I expect to know positively, whether he has or not, within the next three months. One thing, in any event, is certain, that neither Dr. Coggin or Prof. Jewett was the first to operate in the United States.

When we think ourself a pioneer in any surgical expedient in the United States, we must always hold an *if* for the frontier surgeon, as we never know what he may have been doing until a long time after it has been done. The first Cæsarean operations, two with success upon the same woman, although performed early in the present century in Louisiana, were not known to the general profession in the United States until after the year 1878.

I commenced my researches upon symphyseotomy in Italy, in the year 1880, and wrote a paper in 1892 that was thought to have been the means of introducing it into the United States in that year. Imagine my surprise when I discovered that it was probably performed in the far South, soon after I commenced to correspond with the Neapolitan operators.

I *believe* that the first American symphyseotomy dates back over fourteen years. I say believe, because the veracity of the operator has been called in question; but I see no reason to doubt his word. However this may be, I have positive, sworn evidence, given and sealed in Court, to the effect that this operation was performed in 1884, more than ten years ago, and in 1889, more than five years ago, an affidavit being given recently, by the patient in the first instance, and by an eyewitness in the second. I can locate these cases even to the house, county and State; but am not at liberty to do this just now. It is sufficient for me to say that I expect to find an operation in the United

States twelve years older than my paper, and three operations antedating that of Prof. Jewett. The question of the credit of priority is nothing. In one sense, I was the means of inducing the operation to be taken up, as a promising mode of delivery, and Dr. Jewett acted promptly as a pioneer under the suggestion; but when we speak of *introducing* the operation, we must hunt for the pioneer in 1880, or in 1884, and not in 1892.

CHOLERA, ITS ETIOLOGY AND TREATMENT; WITH ESPECIAL REFERENCE TO THE LIGHT THROWN ON THIS SUBJECT BY THE RECENT EPIDEMICS.

BY GEORGE T. KEMP, M.D., PH.D.

Continued from page 468.

§ 6.

DRUGS RECOMMENDED IN CHOLERA.

No Medication.—From a study of previous epidemics and a comparison of results of treatment with his experience at present Michael (DMW, 1892, p. 1026) says, the best thing to do, is simply to keep up external heat, give hot drinks, and meet the indications as they arise. He treats his patients without so-called medication. Wilmans (DMW, 1892, p. 885) treated 100 cases at Wilhelmsburg, an island in the Elbe, without any medication, simply regulating food and drink. He had a mortality of 50% and said his patients did as well as those who were on different treatment in Hamburg.

Acids.—Of the various acids recommended, hydrochloric, sulphuric and lactic are the only ones that need be considered. The value of hydrochloric and sulphuric acids well diluted as a prophylactic has been established beyond doubt. (For hypodermic use of sulphuric acid and morphine, see morphine.) Sulphuric acid, usually in the aromatic form, makes one of the best additions to mixtures containing opium. Lactic acid has been much used as a routine treatment, especially in France.

Kutner (DMW, 1892, p. 797) finds the following the most efficient of all remedies tried.

Acid lactic	15
Aq. dist.	200
Syr. simp.	100

Dose ℥ ss every half hour, later every two hours. He quotes Marfan, that stools in cholera were always akaline, but quickly became acid from use of above. Bethe (DMW, 1892, p. 1200) regards the above formula as good, when given persistently. Rumpf (DMW, 1892, p. 878) says of lactic acid. "It cannot be asserted that a well-marked favorable action can be ascribed to it." He says the same of hydrochloric acid. Eisenlohr (DMW, 1892. p. 1176) says that lactic acid is not given in as large doses in Germany as in France; hence the difference in results.

Alcohol.—Alcohol is generally recommended as a stimulant, although some are opposed to its use.

Ammonia.—Ammonia has been highly praised as a remedy, notably by Giacich of Fiume. Giacich, after an experience of over fifty years, having passed through many epidemics prefers ammonia and alcohol by the mouth, with subcutaneous injections of ether, to all other methods of treatment; claims to save 50% of collapsed patients by this treatment. This treatment is endorsed by Mayländer (BKW, 1892, p. 909). Berg (DMW, 1892, p. 818) highly recommends ammonia for adults but not for children.

Anticholerine (*Klebs*).—Fedoroff (ZFH, xiii, p. 400) gives a clinical history of six cases treated by antitoxin from which he thinks that four out of six can be regarded as benefited. (He uses the word *geheilt* but this cannot mean cured, for all but two died.) He mentions particularly that the number of cases is too small to base positive opinions upon, but refers to the harmlessness of the antitoxin, and thinks the results obtained by him warrant it a wider trial. Manchot (DMW, 1892, p. 1050) regarded what action there was as of benefit rather than harm. Bacteriological examination did not show diminution of the number of spirilla in the fæces. In the Berl. Klin. Wochenschrift report of the Wiesbaden Congress, Rumpf is reported as having said that while statistics did not show that the Klebs anticholerine was of value, the patient often showed improvement in symptoms (günstige Beeinflussung des klinischen Verlaufes). The temperature always rose.

Benzol Naphthol.—This remedy has been used to some extent in cholera. Kutner (DMW, 1892, p. 797) says it is good, but not as good as lactic acid. He gives it in capsules to the extent of ℥ i in twenty-four hours.

Bismuth.—Although preparations of bismuth are recommended by some eminent authorities the greater number of observers regard them as too weak to combat cholera. They are useful in the relaxed condition of the bowels which sometimes follows cholera as a sequel.

Caffeine.—Coffee is widely recommended as a stimulant and its value as such is due, doubtless, to the caffeine. Caffeine for hypodermic injection has been tried, and highly spoken of. Heyse (BKW, 1893, p. 20) gives .1 to .2 grammes which is equivalent, to gr. iij. Kutner (DMW, 1892, p. 797) praises it as a stimulant for the nervous system, heart and kidney. It is used and approved in the three Paris hospitals, Beaujon, Trente-six and Necker. The salt he employs is the double salicylate of sodium and caffeine.

Calomel.—Calomel has been recommended in every stage from premonitory diarrhœa up to, but short of, collapse. Some prefer to give a large dose followed by smaller doses, but the general rule is to begin with small doses at intervals of a few hours, and continue this treatment for several days. After trying calomel in various ways Rumpf (DMW, 1892, p. 878. 1893, p. 381) found the most satisfactory manner to administer it was in $^3/_{10}$ to $^3/_4$ grain doses every two hours. The result was variable: Frequently the number of stools increases. If vomiting prevents the administration of calomel give a few drops of cocaine solution, $1^0/_0$, usually vomiting stops after several calomel powders have been taken. Lauenstein (DMW, 1892, p. 907), after a large experience during the Hamburg epidemic discarded all other mouth remedies for calomel. He gave it in $^3/_4$ grain doses. Ratjen's experience was practically the same (DMW, 1892, p. 981. 1893, p. 10) Ratjen, Heyse (BKW, 1893, p. 20) and Bethe (DMW, 1892, p. 1200) all emphasize the necessity of beginning with calomel, on suspicion and not wasting time with castor oil and opium. The same point is made by Walter (BKW, 1892, p. 1063). Tipiakoff (RScM, Vol 41, p. 151) prefers calomel to all other drugs. He gives it in doses of $^9/_{10}$ grain every hour. He gives statistics of 615 cases in which his calomel cases gave a mortality of $56^0/_0$. He points out especially the unusually large number of *foudroyant* cases where the patient died within a few hours from the onset of the disease. These cases, of course, were beyond tqe reach of any remedy given by the mouth. Heyse (BKW, 1893, p. 20) says calomel is the only drug he continued to use by the mouth. He gave it until the stools became dark, and finds that doses of from gr. jss to gr. iij work best. Walter (BKW, 1892, p. 1063) cautions against continuing calomel too long in cholera. He says the effect on the kidneys is bad. Eisenlohr (DMW, 1892, p. 1004) says that small or medium doses often produce good results, but warns against its continued use, on account of the danger of diptheritic inflammation of the intestine as pointed out by E. Fränkel. Korach (DMW, 1892, p. 1053) gives a few doses of calomel, $^3/_4$ grain each, at intervals of several minutes, then gives $^3/_4$ grain every two hours for three days when he stops the calomel and puts the patient on bismuth.

Camphor.—Camphor is largely used in various standard formulas for cholera mixtures, etc. It makes an excellent addition to prescriptions containing opium. It has been considerably used, as a stimulant in cholera. Guthman, Nothnagel and Kahler (DMW, 1892, p. 797) and Rumpf (DMW, 1892, p. 878) all recommend it as a hypodermic injection in threatened collapse and in collapse. For hypodermic use it is best dissolved in sweet almond oil 1 :9.

Chlorine Water.—Chlorine water was tried by Rumpf (DMW, 1892, p. 878) who pronounces it useless if not positively harmful.

Chloroform.—Chloroform is a favorite adjuvant to the opium treatment, and as such is certainly beneficial. Macnamara uses it to induce absolute rest. In cases where there is much restlessness with the diarrhœa and vomiting he has seen the happiest results from this treatment. Despretz (DMW, 1892, p. 863) has used it since 1866 and thinks it is an intestinal antiseptic. It has been used considerably in the last epidemic to check vomiting. Walter (BKW, 1892, p. 1063) says that chloroform is the best medicine we have to check vomiting, and should be used if hot or cold drinks do not suffice. Eisenlohr (DMW, 1892, p. 1004) has compared chloroform and resorcin and prefers chloroform in ten drop doses. Kutner (SchJb, Vol. 236, p. 137) gives ice and aqua coloroformi ; Maclean recommends chloroform stupes and chloroform by the mouth at the same time. In the internal administration of chloroform it may be well to recall a fact long recognised in medicine, that chloroform agrees better with the stomach when combined with aromatics than when taken alone. This fact will be seen to have been remembered if we study the formula of various cholera mixtures containing it.

Cocaine.—Cocaine has been highly praised as a specific for the vomiting of cholera. It is given subcutaneously or by the mouth. Kutner (DMW, 1892, p. 797) and Heyse (BKW, 1893, p. 20) give it subcutaneously, about $^1/_5$ grain or a trifle more. Mendel and Simon (DMW, 1892, p. 818) give the following formula which they praise highly. The numbers are grammes : acid mur. 2 ; cocaine mur. 0.12 ; tr. op. spt. 2 ; aqua dist. 170 ; syr. simp. ad 200. Direct to be taken every hour until vomiting ceases. Dose :

a tablespoonful, ice cold. Rumpf (DMW, 1892, p. 878) finds it sufficient to add a little cocaine to the drinks, and suggests this as best method of administering it.

Creolin.—Creolin has been recommended by Groneman (Monograph, 1892) 5.0 in 100 to 200 water, taken at one dose. Rumpf (DMW, 1892, p. 878) has tried it, but condemns it. He says it is harmful and produces nausea. Guttman (DMW, 1892, p. 930) finds the same fault and says patients object to taking it. Lauenstein (DMW, 1802, p. 907) gave it in 2½% solution by the mouth and 1% per anum. Patients objected to the burning in the stomach, called it horse medicine, and refused to take it. Korach (DMW, 1892, p. 1053) says it does more harm than good.

Creasote.—Tried by Rumpf (DMW, 1892, p. 878) but said to be harmful. It induces vomiting.

Cresol Preparations.—These have been tried by Rumpf (DMW, 1892, p. 878) but he has seen no good effect from them.

Ether.—Ether as a stimulant has been highly praised by Nathnagal and Kahler (DMW, 1892, p. 797) who give it in ten to twenty drop doses in spirits. As a hypodermic injection it is highly praised by Giacich and Mayländer (BKW, 1892, p. 909) and by Guttman. The latter combines it with camphor.

Lactic Acid.—See acids.

Morphine.—See opium.

Opium.—Opium which was formerly considered the sheet anchor in the treatment of cholera, has lost ground very much during the last epidemic. Gaillard says he has never seen any good effect from opium in cases of genuine asiatic cholera. Rumpf (DMW, 1892, p. 878. 1893, p. 281)says it may be tried "but its efficacy is doubtful." Bethe (DMW, 1892, p. 1200) used opium at first and then discarded it for calomel. Eisenlohr (DMW, 1892, p. 1004) abandoned opium, believing that he had seen more bad effects from it than good. Heyse (BKW, 1893, p. 20) has had the same experience, and does not use it even to control cramps. Hypodermics of the watery extracts make the best way of giving opium in cholera. It holds well and does not disorder the stomach. Morphine may be given for quicker action to control cramps, vomiting, or tenesmus. At the solicitation of an American physician, Rumpf (DMW, 1892, p. 868) tried hypodermics of morph. sulph. and dilute sulphuric acid, and condemns them most emphatically, as does Lauenstein also (DMW, 1892. p. 907) who has seen gangrene result.

Resorcin.—Resorcin has been highly recommended by Feilchenfeld (DMW, 1892, p. 956. RScM, Vol. 41, p. 152) as a specific for the vomiting of cholera. He prefers it to every other remedy. Lauenstein (DMW, 1892, p. 907) condemns it, and Eisenlohr (DMW. 1892, p. 1004) does not use it, finding it inferior to chloroform.

Salol.—Salol was first recommended by Sahli, 1886, Hueppe, 1890, and Rosenthal. It was supposed to act as an intestinal antiseptic. It has some advocates, more are against it. Löwenthal (Med. Record, 1892, p. 349) quotes Francisco J. Gonzales y Salvador, who treated fifty-three cases with salol in the Philippine Islands and only lost three. Hahn (BKW, 192, p. 962) after an experience of sixty cases at a marine station on the Volga, found salol of benefit in the general run of cases, before the algid stage. Eisenlohr (DMW, 1892, p. 1004) gives ʒ ss for first dose, and fifteen grains thereafter. Results good in moderate cases, no good in algid stage. No bad effect were seen to follow it. Rumpf (DMW, 1892, p. 878) has tried it often but finds it of no value at any stage. Kutner (DMW, 1892, p. 797) has also tried it and says it is without effect. Korach (DMW, 1893, p. 1053) finds it does more harm than good. Hueppe still contends that salol is an intestinal antiseptic but thinks it is not the best remedy. He no longer recommends it.

Sulphuric Acid.—See acids and opium hypodermic.

Tribromphenol.—In a small number of cases in Hamburg, Hueppe was allowed to try tribromphenol. He places it first on the list of remedies, with calomel second. In eleven severe cases, all in the asphyctic state, he had a mortality of 45.4% which is above the general average for all the cases, mild and severe, and considerably better than the statistics of other methods for severe cases only. The urine reappeared more promptly than under any other treatment, and the kidneys showed less change than even the kidneys of those cases on whom only injections had been used. This difference was so striking that it called forth immediate exclamation from the pathologist making the examination. *The fæces were found to be sterile.* If these observations are found to be true for a large number of cases we have certainly made a big step in the right direction. The tribromphenol should be given in the form of tribromphenol-bismuth, as follows : First dose gr. xv. During the day ʒ i. divided into eight doses. During the nights two to four doses of gr. vij. each, if patient is awake. Continue at this rate two to five days. Dose must be tried cautiously (BKW, 1893, p. 262).

(To be continued.)

GENERAL OBSERVATIONS UPON SURGICAL TUBERCULOSIS.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to The Methodist Episcopal Hospital, Brooklyn.

A portion of the discussion upon Tuberculosis before the Medical Society of the County of Kings, February 20, 1894.

Concluded from page 480.

Of tuberculosis in general it may be said, in view of the unfavorable prognosis of the diseases dependent upon tubercular infection, that these, from the surgical standpoint at least, should be placed among the affections requiring radical local means for the destruction of the infectious agent upon which they depend, as well as the removal of the degenerated structures resulting from the presence of the latter.

Among the means to be employed for this purpose, it may be stated in a general way, in this connection, that the employment of certain agents, by intra-articular and parenchymatous injections, as well as those chemical means of a destructive character employed for their caustic action elsewhere, are in vogue among surgeons and resorted to when by the circumstances of location, or from any other reason, extirpation by means of the knife and curette are contra-indicated. Under ordinary circumstances the latter means are those of choice. The first named, however, have a definite place among the resources of the surgeon, and may be glanced over with advantage in this discussion.

The employment of local specific medication in the attempt to influence specifically conditions of granulating inflammation was made long before the discovery of specific pathogenic bacteria. It is only, however, since the true natureof the tubercular process particularly has been studied both experimentally and clinically, and the anti-bacterial action of a number of antiseptic substances discovered, that this method has yielded anything like a satisfactory result.

Tincture of Iodine.—Among the agents which have gained the confidence of the profession to a greater or less extent may be mentioned tincture of iodine. The tincture, either diluted with a solution of iodide of potassium or pure, has been extensively employed in chronic hydrops articuli (Brainard). The injection was usually made through a trocar, which was likewise used to evacuate the fluid from the joint. The principal objection to the employment of this measure is the excessive reaction and pain which it produces. While its use has been thought by some to be indicated in specific granulating inflammation, it is probable that its employment will be limited to simple serous or catarrhal synovitis. It should never be permitted to remain in the joint to any great amount, but should escape, as quickly as may be, after its introduction, flexion, extension and friction to the parts sufficing to bring it in contact with the articular surfaces. The specific action of the drug is open to considerable doubt.

Carbolic Acid.—The use of carbolic acid hypodermatically as a symptomatic remedy (Hueter) has been resorted to. It has been likewise employed by Hueter as an intra-articular injection, as a specific, in microbic infection. Although some brilliant results were obtained, especially in osteomyelitis, the use of carbolic acid, both by this method and that of intra-articular flushing of the joint cavity, has been abandoned as an anti-tubercular remedy.

Arsenious Acid.—The use of arsenious acid was attempted, and experiments made upon rabbits and guinea pigs to determine its efficacy (Cavagnis). Four of each of these animals were inoculated with tubercular material and subsequently treated with the solution of the arsenite of potassium (Fowler's solution). The animals were destroyed after twenty to thirty days; all of the guinea pigs and one of the rabbits were tubercular. The other three rabbits presented the anatomical lesions common to tuberculosis, but inoculation experiments made with the contents of lesions yielded negative results. Attempts to follow up these experiments by clinical observations (Landerer) yielded unsatisfactory results.

Corrosive Sublimate.—Corrosive sublimate has become very popular as an anti-bacterial remedy in wound treatment. Experiments have been conducted with a view to its anti-tubercular action when used locally (Cavagnis), but without success. It has been injected into tubercular joints (Voigl), but its use was soon abandoned.

Phosphate of Iron.—Acidulated solutions of phosphates have been employed (Kolischer). A faithful trial of the remedy at the Tübingen Clinic was followed by negative results (E. Müller).

Chloride of Zinc.—Injections of chloride of zinc solutions (Lannelogue) have proved more successful, particularly in cases of tubercular lymph-adenitis. Its power seems to depend upon the property which it possesses of converting softened tissues into hard fibrous structures. The injection is made into the periphery of the lesion so as to stimulate the surrounding healthy structures to active proliferation, and thus bring about encapsulation of the tuberculous focus. It is employed as an intra-articular injection, about ten drops of the solution (10 per cent.) being thrown into the upper recess of the knee-joint through several punctures. Some good results are reported (Moncorvo).

Balsam of Peru.—It is now more than thirty years since this agent was first introduced as a wound dressing about operation wounds for tubercular processes (Sayre). Nothing more than a general stimulating effect was attributed to it, however, until more recently, when experiments were made to determine its anti-tubercular action (Landerer). As a result of these experiments no specific effect could be shown, but it was demonstrated that it brings parts with which it comes in contact in such a condition as to render the pathogenic action of the tubercular bacillus harmless. It is employed both for fistulous and deep-seated tubercular processes and parenchymatous injections; for the first named, a 1–5 solution of balsam in ether, and for the last. a 1–4 emulsion with oil of sweet almonds and 0.07 per cent. solution of sodic chloride are used. The employment of gauze prepared with the balsam as a wound dressing after operations for the removal of tubercular products has been recommended (Vámossay). Attention has been called to the fact, in this connection, that the balsam, when used in too large quantities or over large wound surfaces, may give rise to toxic symptoms referable to the urinary apparatus, such as albuminuria, acute nephritis, and cystitis (Binz). Care, however, will avoid these sequelæ in its use (Landerer). Its usefulness has become assured, although its anti-bacilliary action has not been established.

Camphorated Naphthol.—One part of pulverized beta-naphthol mixed with two parts of pulverized camphor, gently heated until fusion takes place, yields a liquid called camphorated naphthol. It is filtered and preserved, well corked in yellow glass bottles (Désequelle, 1888). It possesses valuable antiseptic properties, and has been used as an injection in quantities of from an ounce and a half to two ounces in articular tuberculosis and tubercular abscess, with favorable results (Périer and Rébone). It may be used alone or in combination with iodine, of which it is a solvent. The action of the drug seems to be but slightly toxic, although large quantities of it are absorbed and found present in the urine for upwards of a week following its use (Désequelle). The large intra-articular injections used did not produce violent local reaction and pain, and were never followed by symptoms of intoxication. Parenchymatous injections are equally successful and free from toxic effects. After erosion of joints and curetting of tubercular abscess, dressings impregnated with camphorated naphthol served all the purposes of an antiseptic as well as an anti-bacilliary application, while speedy healing and freedom from relapse followed.

Iodoform.—It is now more than ten years since Billroth and Mikulicz began the treatment of tuberculous diseases by means of iodoform injections. It was not, however, until Mosetig-Moorhof published his experiences with this drug, that its anti-tubercular action was seriously discussed.

Experimental studies (Froye, Jangl, Gosselm, Thiéry) show that a very decided influence over the progress of tuberculous affections is exercised by iodoform. Opinions differ, however, as to whether this influence extends to the point of absolutely destroying the bacilli, inhibiting their growth, or rendering the tissues involved in the local disease or the entire animal immune to the progress of the disease.

Surgical clinicians with very few exceptions recognize the anti-tubercular property of iodoform. In spite of the varying results of experimental work in this direction, clinical results have been quite uniform and favorable.

The methods of employment vary with the location of the disease, the extent of the tissue involvement and the progress which the affection has already made. In the case of tubercular foci in the bones which are accessible to the knife and curette, the resultant cavity may be filled with the unpowdered or coarse crystals, in order to guard against a too rapid solution of the drug.

In the case of cold abscess, after emptying the latter and curetting its walls, supplementing this by a thorough scouring of the same by means of dry sterilized coarse cheese-cloth or gauze, a sterilized ten per cent. emulsion of iodoform in glycerine may be thrown into the cavity. After manipulating the abscess walls from without, in order to insure thorough contact of the interior of the emulsion with the same, the superabundant portion is forced out and a compressing cushion of some antiseptic absorbent material applied.

In tubercular lesions of the joints, under circumstances where mutilating operations, such as excision of the joint surfaces or amputation of the extremity, are to be looked forward to as the probable outcome of the case unless the progress of the disease can be arrested, the ten per cent. iodoform emulsion is to be employed in the shape of parenchymatous and intra-articular injections. Where the joint cavity contains synovial fluid in appreciable amount, or tubercular pus, the injection should be preceded by a thorough washing out of the former with some bland and unirritating fluid, such as a five per cent. solution of boracic acid. These injections should not be made oftener than once a week, and during the intervals the limb should be kept at perfect rest. Moderate passive movements of the joint following the injection are of service in promoting thorough dissemination of the injected fluid, providing great pain is not excited thereby. In the case of children it is my habit to permit these to go out of doors, providing the weather will permit. As soon as decided improvement takes place, the plaster-of-Paris apparatus which has been employed to ensure immobilization is abandoned. In the case of the lower extremity, whether the hip, knee or ankle-joint are the seat of the tubercular affection, these are protected by the application of a Taylor's hip-joint, or Thomà's splint. This apparatus will be found equally efficient for all the articulations named, and will permit of some exercise and out-of-door life, always a great desideratum in these cases.

It is always a question, in these cases, just how long the treatment should be persisted in, in cases which evidently are not to yield readily to any treatment short of operative interference. It is not to be expected that foci situated in the osseous tissues of the joints will yield to the treatment, however long it may be persisted in. If there are no manifest signs of improvement after three or four injections it is useless to expect the treatment to be of any avail; the case has passed beyond the stage of tubercular synovitis or empyema of the joint. In other cases the last named may follow extensive sequestration of the articular extremities involved in the tubercular disease, the tubercular synovitis being secondary to the bone involvement. In any event, whichever structure is the seat of the primary disease, the occurrence of tubercular osteitis is usually the indication for evidiment or excision.

Failure to benefit tubercular synovitis may follow the iodoform emulsion treatment, either through failure to reach the entire serous surfaces, or because of the presence of an idiosyncracy on the part of the patient to the general effects of iodoform. A typical erasion, the entire synovial tissues being carefully removed by the scalpel or scissors, is here indicated.

Should the anti-bacilliary treatment fail, nothing will have been lost; but, on the contrary, the preliminary injection of iodoform emulsion into the joint cavity constitutes a valuable preparatory treatment to the open incision and erasion, scooping or excision.

The question of whether or not any deformity present should be corrected during the treatment by the local use of anti-bacilliary remedies is of importance. Generally speaking it will be found preferable, as the safer course, to omit endeavors at redressment, particularly where considerable force is necessary, in accomplishing this object. The disturbances set up by these attempts lead to a lessening of the local vital resistance, and favor further infection.

Cinnamic Acid.—Professor Landerer, of Leipzig, has announced the discovery of anti-tubercular properties in cinnamic acid, although the existence of antiseptic properties in this acid had been previously discovered by Behring. It is a noteworthy fact that, while, clinically, very favorable results have been obtained, experimentally and outside of the living animal body (Richter) the acid is shown to be but an inhibitory antiseptic, at best. It seems to be almost absolutely inert when brought into contact with pure cultures of tubercle bacilli, so far as destroying the latter is concerned, inasmuch as these cultures, even after twenty-four hours contact with the acid, promptly produced both focal and metastatic tuberculosis when subcutaneously injected. Experiments thus far seem to show that the action of cinnamic acid is not so much upon the tubercle bacilli as upon the granulating inflammation resulting from their presence. Nutritive changes at the periphery of the tubercular nodule are induced by the action of the drug, and encapsulation takes place, within which necrotic changes are diminished, both cheesy and calcareous degenerations cease, and vital processes upon which proliferation of the tubercle bacilli depends are so far arrested that the latter either perish altogether or are inhibited in their development. The same effects are observed whether the cinnamic acid is brought into contact with the tuberculous disease in loco by direct applications, such, for example, as the injection of a five or ten per cent. solution in glycerine into a tuberculous abscess, or an, alkaline emulsion* injected directly into a joint the seat of a fungous tuberculous process ; or through the medium of the circulation by the employment of intravenous injections consisting of a five per cent. watery solution of the sodium cinnamate.

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* Cinnamic acid, one part ; almond oil, ten parts ; the yolk of one egg ; a sufficient quantity of a seven-tenths of one per cent. solution of chloride of sodium to make one hundred parts. To insure alkalinity. which is important, five drops of a seven and a half per cent. solution of sodium hydrate is added to each cubic centimeter of the emulsion.

All of these methods are employed by Landerer. The intravenous injections are made into the cephalic vein. Subcutaneous injections are made into the gluteal muscles. In joint tuberculosis the injections are made directly into the fungous mass and into the joint cavity as well. In lymphatic tuberculosis all broken down tissue should be removed by curettage, the cavity left treated by balsam of Peru and the surrounding structures by cinnamic acid injections. Tuberculous abscesses are to be first emptied, washed out with a solution of chloride of sodium, slightly above the normal (.7 per cent.), and then injected with a 5 or 10 per cent. solution of cinnamic acid in glycerin, the quantity employed varying with the size of the abscess cavity. Thirty ccm. of the stronger solution may be used with safety. Lupus is treated by injecting the nodules with a 5 per cent. solution of cinnamic acid in alcohol. The same solution is employed in the treatment of tuberculous fistulæ.

Wherever the focal disease can be reached, local, combined with gluteal subcutaneous, and, perhaps, intravenous injections, are simultaneously employed. In internal tuberculosis the two latter methods are relied upon.

Taken altogether, the results obtained in surgical tuberculosis by both iodoform and cinnamic acid injections are sufficiently encouraging to warrant their employment under circumstances where radical operative procedures cannot be instituted without risking the life or limb of the patient, or, perhaps, giving rise to great deformity. Where curetting, evasion, scooping or excision are necessary, the employment of these agents, either preliminarily or as a portion of the after-treatment, is rationally indicated, in the light of the favorable clinical experiences following their use in the hands of their original advocates.

Treatment by means of Hyperæmia due to Venous Obstruction. —This method originated with Bier*, one of Esmarch's assistants at the Kiel clinic. It is based upon the old belief that cyanosis is incompatible with tuberculosis. It consists in placing an encircling band, made of some elastic material, around the limb, a few inches above the part affected, thus producing, by the exercise of just sufficient pressure to produce venous congestion, a more or less continuous hyperæmia of the limb at and, to some extent. below the site of the disease. The patient is not placed under any restraint, but, on the contrary, is encouraged to use the limb as much as possible. The portion of the limb below the diseased joint or affected area is enveloped in a cotton or flannel roller, in order to limit the congestion as much as possible to the latter and to prevent an undesirable œdema of the extremity.

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*Kiel and Leipzig, 1893.

In order to permit of the wearing of the elastic band continuously by the patient, the former should be sufficiently broad to distribute the pressure over a space of at least three inches, in the case of the thigh, for example. Several thicknesses of lint, a cushion of lamb's wool, or a broad roller of flannel placed beneath the elastic bandage, serves to protect the skin. The point of pressure may be varied from time to time, with the same object in view.

One of the earliest effects of the treatment consists in a marked amelioration of the pains in tuberculous disease of the joints. If this takes place within the first four or five days, the case may be considered as one favorable for treatment by this method. If in from eight to fourteen days this is not noticed, and particularly if, on the contrary, the pains are increased, this is evidence that the case is not one suited to treatment by this method. In cases benefited by the treatment marked improvement and, in some cases, apparently complete cure, took place within eight weeks.*

Miller,† in the employment of the method in cases of joint disease, employs fixation of the parts by some form of apparatus in addition to the elastic band. He prefers to remove the band at night, rather than risk continuous congestion.

The rationale of this treatment does not seem to be well established even in the mind of its originator, although there can be no question as to the favorable results obtained temporarily, at least. In this, as well as in other methods of treatment, the results depend upon the extent to which the affected tissues themselves take part in the battle against the disease. The processes of cure, whatever the means employed, with the exception of mutilating operative procedures, are facilitated by, if not actually solely dependent upon, the reaction which takes place in the tissues. Certainly this is true in cases in which spontaneous cures take place, the powers of vital resistance being alone able to overcome the tuberculous process. In those individuals whose powers of resistance are at a very low ebb, or are absent altogether, this as well as all measures employed heretofore are without avail. Doubtless Biers' method enhances the processes of reaction in the diseased tissues, thus furnishing to the latter that increased vital force necessary to overcome the bacillus.

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*Mikulicz, Centralblatt für Chirurgie, No XII, 1894, p. 268.

†Edinburg Medical and Surgical Journal. February, 1894.

Whether in addition to this the congestion so modifies the germ itself as to produce an auto-tuberculin effect, is, at the present time, merely a matter of speculation.

It is more than likely that the favorable effects sometimes obtained from snugly applied plaster-of-Paris bandages, and other portative apparatus of a fixed character were really due to the hyperæmic conditions which these produced. This view is advanced by Bier and supported by Mikulicz.

At the commencement of the treatment the bandage should not be tightly applied, and it may be removed at night, at first, although Bier strongly insists upon continuous hyperæmia whenever possible. Some patients will only bear its application for a few hours at a time, while others do not complain of pain, although the band has been applied for a long time, and with considerable pressure. The latter class of patients should be closely watched, lest some mishap befall them from too great or too prolonged pressure. In one case treated by Mikulicz, after this method, the patient, a child, complained so little that the parents, after four weeks of treatment, neglected to bring the boy to the clinic for a long time, the bandages being continually applied. Extensive muscular atrophy took place not only in the arm where the band was applied for a tubercular elbow-joint, but in the forearm as well.

The method may be carried on in conjunction with other treatment—such, for instance, as the use of fixation apparatus, as suggested by Miller, or the employment of intra-articular or parenchymatous injections of iodoform or cinnamic acid.

WHAT IS A REASONABLE STANDARD IN THE MEDICAL CIVIL SERVICE EXAMINATION FOR POLICEMEN AND FIREMEN?

BY ROBT. L. DICKINSON, M.D.,
One of the Examiners for the Brooklyn Civil Service Commission.

Read before the Medical Society of the County of Kings, May 15, 1894.

There has been a certain lack of understanding of the methods employed in the attempts to select for the two large city departments the greatest possible number of good men, and therefore it has been deemed wise to submit to the Society some of the reasons for the standard adopted, and to ask for suggestions. Such action on the part of the writer is unofficial, but it is his belief that this is one of the medical matters connected with the city government in which the Society should care to have a voice, and should have both voice and vote.

The qualifications that can rightly be demanded of a candidate depend upon the conditions of the work which he desires to perform. The patrolman's duties are somewhat familiar to us all. He must stand exposure to all weathers, irregular hours, crowded dormitories, and certain risks of life and health. His pay ranges from $800 the first year to $1,100 the third year and thereafter. During illness his pay continues, and medical attendance is provided. If partly or wholly disabled in the discharge of his duty, he may be pensioned. If he meets his death under these circumstances, the Commissioner may grant a pension to his family as large as that accorded in the army or navy to the families of the highest officers—except under special act of Congress—namely $400. By competitive examination he may rise to positions which bring in salaries ranging from that of roundsmen, $1,200, to that of captain, $2,700.

In the fire department the duty is still more irregular, consisting of days of comparative idleness, followed by long hours and days of the severest strain, soaked to the skin, alternately in cold winds or blazing heat, inhaling smoke and burning air. The maximum salary of the fireman is $1,050, attained in his third year, while the district engineers receive $2,500. Here, also, free medical aid and a pension, at the option of the Commissioner, care for an injured man or his family.

We see, therefore, that in these departments the men are paid an average of $3 a day, including Sunday, which is more than the skilled laborer gets ; that they are cared for in sickness ; that they are pensioned; and that after twenty years' service they may retire on half pay. Has not the city that cares for its men so well a right, then, to pick choice men ? Has it not a right to place its standards high, and to require that applicants shall not only reach a certain height and weight and chest-girth, but that they shall be practically sound men, active, muscular, clean, and hardy ?

The Requirements ; how Fixed.—Our standards are not arbitrary, but are based on the requirements in an analogous service, modified to the special needs of the particular work of each department. In the armies of the world there is found a large body of medical men having the opportunity to study men at their entrance into service and for years thereafter, and to observe what size of man and what proportions of the body work best, what defects become accentuated, and what special diseases or injuries are liable in time to disable a soldier. The best publications on this subject have been collected by Major Charles R. Greenleaf, Surgeon in the U. S. Army. His valuable "Epitome of Tripler's Manual and other Publications on the Examination of Recruits" will be of the greatest service in starting our inquiry, and these official army directions may be readily adapted to our special local conditions. As an example of such adaptation we see at once that the fireman needs no such rigid examination of the condition of the feet as is demanded in the case of the applicant for patrolman, and that agility and suppleness shall count for more in the fireman than in the policeman.

This study of men with reference to important or unimportant defects becomes somewhat of a specialty, because there are many border-line cases and there are certain rare defects cropping out, once in a thousand cases or thereabouts, that must be recognized or rated. Let us take any of the penalties man pays for having assumed the upright position, such as varicose veins, piles, varicocele, flatfoot, or spinal curvature. What degree of flatfoot, for instance, should disqualify an applicant? There is the broken arch that has lost its curve in infancy; it may look as much deformed and may seem as likely to cause aching after many hours standing on hard pavement as the really painful condition in which spasm exists and which should rule a man out. One may readily overlook an obscure injury, such as a deep depression of the skull hidden under thick hair, or pass by a case of stinking feet that would overpower a bunk-room, unless one is in the habit of watching for each detail. Many of the questions that arise can only be decided by the results of collective investigation, such as the proper relations of height and weight and chest circumference, based upon examinations on large numbers of men in civil and military life by skilled observers. Here is one of the tables—the minimum height for the policeman being 5 ft. 7½ inches, and for the fireman 5 ft. 5 inches.

	Weight must be not less than......	Average chest measurement be not less than the following; have expansion of at least 3 in.
For height of 5 ft. 5 in.	125 lbs. (U. S. Army, 130)	32½ in. (U. S. A. 33)
For height of 5 ft. 6 in.	130 lbs.	33 in.
For height of 5 ft. 7 in.	135 lbs.	33½ in.
For height of 5 ft. 8 in.	140 lbs.	34 in.
For height of 5 ft. 9 in.	145 lbs.	34½ in.
For height of 5 ft. 10 in.	150 lbs.	35 in.
For height of 5 ft. 11 in.	155 lbs.	35½ in.
For height of 6 ft.	160 lbs. (U. S. Army, 169)	36 in.
For height of 6 ft. 1 in.	165 lbs.	36½ in.
For height of 6 ft. 2 in.	170 lbs.	37 in.
For height of 6 ft. 3 in.	175 lbs.	37½ in.

Nor is our standard rigidly fixed, like an ordinance of the Mikado, which the Japanese say is like the perspiration—it can never go back.

"It is not necessary that the applicant should conform exactly to the figures indicated, a variation of a few points being permissible if the applicant is in good health and desirable as a recruit. Any considerable disproportion, however, of height over weight is a cause for rejection, but a marked disproportion of weight over height is not cause for rejection, unless the applicant is positively obese."

The conditions of the service in the Police Department favor the development of fat, as we know. Therefore we are in the habit of excluding men with protuberant abdomens and those who are flabby, because on regular outdoor patrol men develop good appetites and digest large amounts, and tend to become very soft and stout. But if a man is heavy out of proportion to his height, and yet that weight is largely due to solid masses of muscle or firm and evenly distributed fat, his weight would not exclude him.

In the same way the proportions of an applicant form an important guide in rating him. A long-legged, long-necked, short-bodied man is usually objectionable for the reason that the body, containing the vital machinery of the man, must be ample, and the size of the body furnishes one good indication of the staying power.

Applicants and Physicians' Certificates.—When a man presents himself at the office of a doctor and the doctor makes a partial examination—all he can afford to make for the fee offered—and the applicant returns to the physician with the statement that he has been rejected as unsound, it is often a question in the mind of the physician what grave physical defect the examiner could have found. It does not always occur to the physician that the examination is a radical one. In outline it is as follows:

Order of Physical Examination.—Before stripping:

Each eye separately, $^{20}/_{30}$ being required. Hearing. Then the teeth, the requirements for which are explained later. After stripping: weight, height, chest measurements, scalp, nose, tongue, throat, neck; groins, genitals, anus, legs, feet, soles, toes; form of chest, heart, lungs, quiet, and after exercise; urine, for albumen and sugar; general condition, muscular condition, skin, flexibility of all joints; identification marks, such as moles, scars, tattoes.

Teeth.—Neither is it always possible for the physician to know the considerations that have led to the adoption of certain regulations. It might appear to the casual observer that it matters little whether the policeman has good teeth or not, and we have been subjected to some ridicule on account of our insistence on a certain standard in the question of masticating teeth. "The condition of the teeth is considered solely with reference to the proper mastication of food. If there are not enough in the mouth for this purpose food is swallowed without the necessary preparation, and indigestion, with imperfect nutrition and its consequent evils, are the result. If several of the teeth are decayed, especially about the crown, it is probable that before the expiration of a five-year enlistment they will be so far destroyed as to render mastication imperfect; hence men who have lost the front teeth from decay and have many unsound back teeth should be rejected. The loss of the front teeth through accident is not cause for rejection, provided a sufficient number of the back-teeth are sound."

"Unless an applicant has at least four sound double teeth, one above and one below on each side of the mouth, and so opposed as to serve the purpose of mastication, he should be rejected." "If the front teeth remain and the double teeth are gone, rejection is demanded." Artificial substitutes cannot be considered as equivalent in value to the natural teeth, or as removing the disability on this account for military service."

If this is true of a five-year enlistment, with the regular brushing and inspection required of the soldier, how much more careful should be our entrance regulations for the life service of the police department, in which no surveillance is exercised!

Varicocele.—Why should we attach much importance to varicocele, and even reject men otherwise good for this defect? The rule that we have been following has been the army rule that, if the testicle is shrunken, or if the knot of vessels is larger than the testicle itself, the applicant should be rejected. Ewing has recently made a strong plea against this regulation [Med. Record, March 17, 1894], his main argument being that varicocele does not interfere with a soldier's duty and that but once, in his experience, has it put a man on the sick list; that atrophy of the testis is due to many causes; that there is no need for a soldier to have finely developed or symmetrical appendages, and that very few cases demand operation. He says that 7% of the English recruits, among them many fine men, are rejected for this cause.

Though varicocele may cause aching after prolonged standing, and though it may impede service in the saddle, on the mounted force, yet it seems to me that it should only exclude in cases where a suspensory bandage would fail to completely and comfortably support it, were these the only grounds for rejection. To me the basis of objection is that in many of the well-marked cases it is but one of the evidences of weak-walled blood vessels. This is demonstrated by the frequency with which other evidence of vascular degeneration accompanies this defect, as piles, varicose veins and persistent abnormalities of sound at the aortic and pulmonary orifices (where gross cardiac lesions are absent), and also by the cases noted in these examinations, where a man has seemed to have no other defect than a good-sized varicocele, and returned in subsequent years with one of the other members of the quartette. Our applicants are often men who have done very severe work, and some of the most splendid specimens of muscular manhood we are grieved to have to exclude for over-strained hearts or blood-vessels.

Prolonged Examinations.—Another fact may be noted in this connection. The doctor, in his office, examines the applicant under very different conditions from those under which we work. At the office, the man may have been seated for some time, waiting. The scrotum has been supported by his clothing. He enters and exhibits a trifling bunch of veins. Let the same man stand about, waiting for his turn, and then strip, taking his place by a hot radiator or stove during his examination—which may last twenty minutes—and the conditions will be much altered. Let the applicant who has presented very scanty evidence of varicose veins at the office stand awhile thus, or rise a dozen times on tip-toe, and the angle worms swell into prominence; and let part of the heart examination always follow a short, brisk exercise, and new points will be brought out.

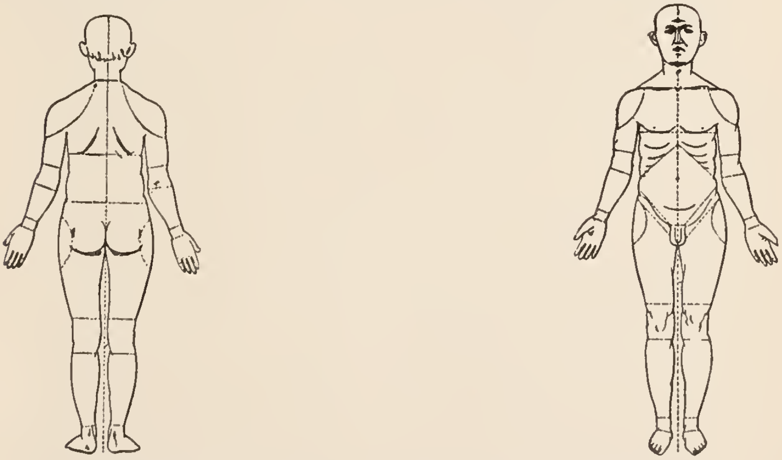
Some misunderstandings are due to garbled reports, although I explain to each man the reasons for his rejection. The sister of a journalist wrote, begging me to reconsider a certain applicant who said I had thrown him out for being ⅛ inch short. Actually he measured ¾ of an inch less than the minimum. We do not reject for a small fraction, since we can straighten the spinal curves of a desirable applicant, and a man is really taller on rising in the morning. One man, half an inch short, was dropped three years running. The fourth year, he measured full size. He explained that he had lain in bed four days, had risen fifteen minutes before the time of the examination and had slipped in first.

By means of the card catalogue system, I can place any applicant that reappears in subsequent years, and can identify him by his scars or other markings, entered on the two outline figures printed on the cards I show you. Large outlines of the figure are likewise printed on the physical examination paper, to keep track of the applicant's identity in the subsequent athletic and mental examinations, and at the time he appears before the Commissioner for appointment, to prevent substitution. I remarked to one man while looking up his card record: "We have seen you before." "Yes," he growled, "you threw me out two years ago for a veiny bolux and a corrugated hole." He was more intelligent than the next, who admitted that he also was rejected, "for a tindincy." "A tendency to what?" "Ah, tindincy naathin'—jist a tindincy." One tough lad had two application papers in. He explained the duplication by the statement that "it was rumored about in me ward dat me application paper was trowed out, so I got in anoder."

The examination is not merely defect-hunting. It is a search for every fine physique we can possibly pass, conducted by a physician appointed by the Commission [to ensure the absence of all political considerations] and a surgeon from the Department of Fire or Police. We are in session from 4 to 7, and in that time can examine the twenty to twenty-four men who appear, out of the thirty summoned daily. because a certain number are at once rejected for defective eyesight or teeth, without the necessity of stripping or measurement. We pass from 25 to 33 per cent. of those who appear, and in the last test for firemen we overhauled 725 men. In doubtful cases, such as tobacco-hearts, and in minor affections, such as bronchitis, we allow the applicant to reappear at the end of the examination, which may be weeks later. A third physician is practically one of the examiners, since the opinion of the Secretary is of high value, when it is of the kind furnished by Dr. Walter Wood, who acts with me, or that of Dr. Bristow, who formerly assisted Dr. Church, or Dr. S. E. Jelliffe.

who is now his Secretary. A waiting room and a dressing room are required, with a third room, well-lighted and very warm, for examining, that a man may not, as one applicant wrote to complain, "be chilled true, and get nomonia; very near been the course of me life."

It requires enthusiasm in the cause of Civil Service reform, on the part of the examiners, to do the work and take the consequences for the scanty remuneration, which is all that the Commission can afford, on account of the restricted appropriation which the politicians grudgingly allow the Commission. There has been no charge made by the specialists to whom we have referred test cases and doubtful cases—Drs. Mathewson, Rand, Lennox and Henry Conkling. And it should not be forgotten that the Commissioners give up a great deal of time to the difficult problems and arduous labors of their position without remuneration. The names of Alexander E. Orr, Chairman, George L. Nichols, Truman J. Backus, A. C. Perkins, Joseph T. Perkins, Willis L. Ogden, J. Warren Greene, and Wm. J. D. Campbell, Secretary, with the knowledge of the time they devote to the duties of the office, insure sensible and thorough examinations, impartial and nonpartisan—one of the greatest blessings our city governmment, or the government of any city, can boast. Brooklyn may rightly claim to have made a long step in the right direction in that reform which one of our leading statesmen declares to be the next great public issue.



OUTLINES PRINTED ON THE CARD OF THE CARD CATALOGUE, BY WHICH A LIST OF ALL APPLICANTS IS KEPT. IDENTIFICATION MARKS, SUCH AS SCARS, MOLES AND TATTOOED PICTURES ARE ENTERED THEREON, AND A LARGE PAIR OF SIMILAR OUTLINES IS USED IN THE SAME WAY ON THE EXAMINATION PAPERS.

DISCUSSION.

The President: We have with us as a guest to-night a gentleman who is President of one of our educational institutions, and one of our Civil Service Commissioners. I will ask Dr. Backus to say something on this subject.

Dr. T. J. Backus: I thank the President for asking me to speak, but I should have been glad to have known beforehand that he wished me to address you. I am happy in hearing the paper which Dr. Dickinson submits to your honored profession, and I trust it has been as interesting to you as to me. Many of the facts stated by the Doctor are familiar to me, and I am also familiar with his method and his spirit in the conduct of his work for the Civil Service Commission. It is gratifying to find this company of learned gentlemen giving their interested attention to what Dr. Dickinson has said.

There is much public-spirited and self-sacrificing work done by citizens of Brooklyn who seldom receive recognition of their services other than the recognition of abuse. The work of the Civil Service Commission attempts to secure for each position on the eligible list the best man who presents himself in competition as an applicant for that position. There is no favoritism in the selection, no political influence—nothing outside his own fitness, which can help a man in securing a place on the lists. His qualifications are scrutinizingly considered by a non-political commission. That Commission employs expert assistants for the conduct of examinations calling for experts. Members of your profession are employed to conduct expert professional examinations of men who seek employment on the uniformed forces of the city, and those experts conduct such examinations as have been described by Dr. Dickinson. Every man who secures a position under the existing regulations, has passed such severe test. The one who comes out on top gets first chance for a vacant position in every case and without exception, save in instances where, by the wisdom of the Legislature of the State, it is made compulsory upon the Commission to appoint a veteran of the Civil War. There came to my attention this afternoon, for instance, a set of examination papers from twenty-five men who are candidates for an important position having to do with the sanitary welfare of the city. The man who passed lowest of all, having $70\frac{1}{8}$ per cent., will, under the law, be placed on the eligible list above men who passed nearly 100 per cent. He will hold the first position, for the simple reason that he is the only candidate who served during the Civil War.

The Legislature, in enacting the law, seems to have disregarded the necessities of a case like this, where the public health is concerned, and where the most expert, whether veteran or not, should have preference over all others.

The mere politician, of course, condemns the methods of the Civil Service. He wishes no hindrance in the distribution of offices among his followers. But it is not the politician alone who condemns the present workings of the Civil Service law. Many a citizen, uninformed as to the facts, and sympathizing with personal acquaintances who have been unsuccessful at their examinations, without thinking, and impelled with his personal sympathy, voices an unintelligent criticism, and thereby contributes towards the delay of the ultimate and sure triumph of Civil Service principles in this country. Our people believe in fair play, and the Civil Service law is a law whose fundamental principle, whose practical details, serve the interests of fair play. Recently, there came to one of the Commissioners a letter written by a clergyman of this city, who, with all seriousness, declared that no man could obtain an appointment on the Police Force of Brooklyn without paying money to the Civil Service Commission for his position on the eligible list. If that statement were true, it would mean that Mr. Alexander E. Orr or one of his colleagues, in collusion with the Secretary of the Commission, or that Dr. Church, the Medical Police Examiner of the Commission, was violating an oath, and giving service to the city for the purpose of reaping dishonest reward. That preacher of righteousness should be more careful of his utterances.

It is of great importance to the public welfare that all intelligent citizens of Brooklyn should know what is being done in the way of attempting to secure the best qualified men for service of the city. I call your attention to the appearance of policemen who have been recently admitted to the force. They are of the finest physique, as they should be for the work they have to do.

We are now conducting an examination for a new Eligible Police List. About 2500 men have applied for examination. Each of them will, in the first place, have rigid medical and athletic examinations. The intelligence of those applicants who survive such tests as the doctors and athletes apply will be passed upon by the Commissioners, and then, before securing a place on the list, each man's vouchers will be carefully considered by the Commissioners, who will require satisfactory endorsements of each candidate for sobriety, for honesty, and for truthfulness. Should the results attending the 2,500 applicants for places on the police force be similar to the results of a recent examination for Firemen, the Eligible List, when made out, will bring disappointment to many. If I remember aright, 714 candidates for the position of Firemen were sent to Dr. Dickinson. His examination rejected 490 men. The athletic examination rejected 66. The 158 men whom the athletic examiners passed were tested for intelligence and character, and 115 were passed. So that of the 714 who supposed themselves to be eligible, there were 115 who were found fully qualified to serve the city as Firemen.

Let me remind you that our city has the honor of being the first in the State of New York to introduce a thorough system of Civil Service Examinations under law. Our State was the first to introduce a State Civil Service examination. We have, I think, under the system carefully developed by former Commissions, as perfect a Civil Service inspection and examination as can be found in any city in the country.

Every member of the Commission feels under special obligation to the gentleman who has read you his paper this evening. We are greatly indebted to him for his efficient, conscientious, enthusiastic services. But for the generous help of Dr. Dickinson and his colleague, Dr. Church, our difficulties would be far greater than they are.

Dr. Dickinson: I have but two words to say, Mr. President. The first is to thank Dr. Backus for his kind expressions, and particularly for his presence, and for his explanation of the spirit of the Commission. I may also state that the spirit of this paper—and I say it particularly to the gentleman who spoke of the relation borne by the physician who certifies on a man's paper that he is sound, to the medical board who examine that applicant when he appears before them—I may say to him that there is no reflection whatever, either intended or expressed, on any physician who sends a man to us. It was rather an explanation on the part of the examining board to the profession at large what our standard was and what the reason of our standard was, taking merely a few instances that have been most discussed. We take it for granted that a physician who examines a man simply certifies that there are no gross or evident lesions which he, as the family physician, would have cognizance of. It could not be expected that a physician in his office, for the sum of $2, should strip a man and go all over him, and test his sight, and hearing, and urine, and have the expert knowledge required for detecting a number of the finer points, which yet are sufficient to disqualify an applicant.

I thank you for your interest in this paper.

PROCEEDINGS OF SOCIETIES.

BROOKLYN GYNÆCOLOGICAL SOCIETY.

A regular monthly meeting of the Brooklyn Gynæcological Society was held in the Society rooms, 356 Bridge Street, on Friday evening, April 6th, at 8.30 o'clock.

The President, Dr. Charles Jewett, in the chair.

There were present Drs. L. G. Baldwin, L. G. Langstaff, Gordon, Law, Dickinson, and Wm. H. Skene.

The minutes of the March meeting were read and approved.

There being no regular paper, specimens, instruments, and histories of cases were presented as follows :

Dr. Baldwin presented two pus tubes removed from a woman twenty-seven years old, the mother of two children, having had a miscarriage shortly before the development of the pus in the tubes.

In the absence of Dr. Kortright, the matter submitted by him at the March meeting for collective investigation by the members of the Society was laid over.

EXECUTIVE SESSION.

The minutes of the last executive session were read and approved.

The secretary reported the result of the ballot on the name of Dr. J. T. Duryea, as follows :

Eighteen votes cast, all in the affirmative.

The Chair thereupon declared Dr. Duryea elected a member of the Society.

On motion adjourned. William H. Skene, M.D., *Secretary.*

PRESENTATION OF SPECIMENS AND CASES.

Dr. L. G. Baldwin : I have here a couple of pus tubes that are not of much interest, but as there was no paper I thought perhaps they were worth showing. The patient is twenty-seven years old, having born two children. the oldest one three years and three months ago, and the second one a year and six months ago, having had one miscarriage five months after the last child was born.

The points of interest that struck me in the specimens were these : that certainly the disease did not exist prior to the miscarriage, at least in both tubes, and she had absolutely no trouble until the miscarriage. At that time she suffered a good deal, although she got up fairly well. Since that time only has there been pain in the left side. The smaller tube is the left one; she had no symptoms referable to the right side whatever. On examination of the left side you could get more of a mass in that side than in the right side. A point of interest about the specimen, if the gentlemen will notice, is the complete way the fimbriated extremities of both tubes are occluded, rendering it impossible for any leakage of pus to occur that way, and if she was in danger by leakage of pus, it must have been through rupture. There were a good many adhesions, and the tubes had to be handled very carefully. There was free pus in the uterine extremity, and the pedicles were cauterized down to the horns of the uterus. It was done a week ago, and the patient has continued to do well.

Dr. Jewett: Did you consider the question of the removal of the uterus, an operation now advocated by Polk and Krug in such cases and which I think had its origin with a French surgeon?

Dr. L. G. Baldwin: No, sir; I did not consider it because I am frank to say in my experience I am not in accord with those who say that removal of the uterus adds but little or no danger to the operation, and as I got out the tubes and ovary complete and cauterized completely into the uterus, I thought it was the best procedure.

Dr. Jewett: It is much less dangerous in the last three months, under the new methods, than formerly.

I have a specimen which in the absence of the usual paper, I brought for the purpose of filling the time. It is an appendix removed about two weeks ago. The case is perhaps sufficiently out of the common to be of some interest. The patient was a boy of about ten years. He developed appendicitis in August last while on his vacation in the country. About two weeks after the inception of the attack he was sent to the Long Island College Hospital. All that could be done was to evacuate the abscess, which was done by Dr. Burge. The patient returned to the hospital twice afterwards with recurrent suppurations. He subsequently got along well until two weeks ago, when I found him with a temperature of 102° and extreme tenderness around the region of the appendix. I operated the next morning by the method which Morris uses in the quiescent period; through an inch and a half incision I found a drachm of pus or a little more, sterilized the cavity with the peroxide of hydrogen and then broke up all the adhesions as far as I could, but found it impossible to lift out the cæcum. I fished up the appendix, distal end first, and managed to ligate it close to the cæcum. A mass of omentum apparently containing septic foci was tied off and removed. The specimen shows a constriction near the point of amputation. All above the constricted point presents the usual marks of inflammation, all below is apparently normal. There was no perforation. In ten days the boy was walking about the room. So comfortable and rapid a recovery would not have been possible with a larger wound, yet the room afforded by the inch and a half incision was ample for the purpose.

Dr. Dickson : In cases of adhesions he would have to enlarge his incision, of course.

Dr. Jewett : Not necessarily, of course. In this case the adhesions were as dense as they could be, and after I had cleaned out the pus with the peroxide, I broke them all up as far as possible, pulled up the appendix and tied it off, and the boy could not have done better under the simple kind of interference.

Dr. L. G. Baldwin : It is not ordinarily necessary in abdominal section for the removal of tubes and ovaries, to have more than an inch and a half incision.

Dr. Jewett : Certain authorities think no more than that is necessary. Morris puts in three tiers of sutures.

Dr. Baldwin : Where does Morris make his incision ?

Dr. Jewett : In the semi-lunar line, which you can generally see, with the patient under the anæsthetic, in the flat position on the back.

Dr. L. G. Langstaff : I have a pair of scissors here for the operation of trachelorrhaphy or perineorrhaphy. They were not devised by me, but I think they are an improvement over the Sims scissors. They are curved in two directions on the flat and on the edge, and they keep the operator's hand out of the way from the view of the operation. They work easier. I think, by having the hand lower down, not having to raise the elbow up to cut. They were devised by Dr. R. B. Townsend, of New York, I think.

Dr. Jewett : They certainly work very nicely, which is not always the case with scissors so much curved ; the edges seem to be in apposition all along the line.

Dr. Jewett : Dr. Cleveland of New York recently presented to the New York Obstetrical Society a set of scissors for perineal operations which were shorter than the usual pattern. I could never see why perineal scissors should be so long, and his at the time struck me as an improvement. In trachelorrhaphy you need length only when you operate with the cervix high up.

Dr. Dickinson: That would involve a different set of instruments for the perineum.

Dr. Jewett: I am not sure he uses the same for both. In making pressure you do not get the leverage with a long pair that you do with a short pair.

NARRATION OF CASES.

Dr. Law: Since the last meeting of the Society I have had a case which, though unfortunate in the result, was of considerable interest to me, and there are some points which I trust you may enlighten me upon. It was an obstetric case occurring three weeks ago. The woman was delivered on Monday morning of a living child after a tedious but not complicated labor. It was finally a forceps delivery, but very little force was used, with very little laceration. The course of events was as usual until Friday, except that it was necessary to use a catheter for two days. On Friday, four days and six hours after the delivery of the child, I called and found my patient doing nicely. No movement of the bowels having occurred for two days, I ordered half a bottle of citrate of magnesia. She took that shortly after I left and, unfortunately reading the directions on the bottle and finding the dose was a bottle full, she took a bottle full after the dose advised by me. It was ice-cold. The next day I did not call until 4 o'clock, when I found her with a temperature of 103 and the history of having had a very severe chill immediately after drinking the large quantity of magnesia. There had been practically no fever up to that time. I ordered a large dose of quinine for that night and the next morning, with the assistance of my associate, Dr. Hickok, curetted and washed out the uterus with an antiseptic solution. We found nothing remaining in the womb and no odor whatever. The temperature was 104 at that time and continued to rise to 106 with cold hands and feet. Monday morning at 3 o'clock she died, a few hours less than a week after confinement. She was a small, delicate women, weighing in health about 95 pounds. Previous to her confinement I had examined her urine several times and found a small quantity of albumen, about 5 per cent. in bulk, but there were no uræmic symptoms and no œdema.

One point of interest was that she had had a fistulous tract opening in the side of some 12 or 14 years' standing, which during that time had continuously discharged pus. Two operations were performed for its relief, one about two years ago by an eminent surgeon of this city, but after determining that the cause was caries of one of the vertebræ he did not proceed. During pregnancy the discharge was very small, not over half a drachm in 24 hours.

It is a question in my mind whether the pint and a half of ice cold magnesia had anything to do with the chill, fever, &c., or whether it was a septic condition. She developed, some thirty hours after the error, considerable abdominal tenderness and had several free movements of the bowels, and during the twenty-four hours preceding death had a frequent discharge of very offensive gas from the rectum.

The fistulous opening was just below the ribs on the right side about 2 inches from the median line.

Dr. Jewett: It suggests a possible mode of infection mentioned by Senn. Rosenbach fractured one of the hind legs of a rabbit and then inoculated the ear with the streptococcus of pus. The seat of fracture became the point of suppuration—while there was no disturbance at the seat of inoculation. It is a question whether in this case reported the pathogenic organisms could have migrated from the point of original trouble in the vertebra to the point of weakest resistance in the pelvic organs. The suggestion is more theoretical than practical, and yet that such an occurence is possible seems to be demonstrated by the experiment alluded to.

Dr. Dickinson: Unless Dr. Law's nurse was exceedingly careful to disinfect herself after dressing the suppurating wound, before catheterizing his patient, it would be very easy to carry infection to the patient.

Dr. Law: She was not a very efficient nurse by any means.

Dr. Jewett: That is a very striking possibility.

Dr. Dickinson: How soon did the fever develop?

Dr. Law: The child was born on Monday morning at 7 o'clock, and the fever developed late on Friday.

Dr. Jewett: A case recently reported in one of the German medical journals is in keeping with the point Dr. Dickinson mentions. The patient had a glass eye and some inflammation of the orbit. The eye was taken out and handed to the nurse; the doctor in charge attributed the infection to that source.

Dr. Dickinson: Did Dr. Law think there was any nephritis in that week after the birth?

Dr. Law: No sir.

Dr. Dickinson: Or any suppression of urine?

Dr. Law: There was no test of the urine after the child was born.

The development of the chills after the magnesia was noticeable. The temperature was normal on the day of the chill, and I do not think it had been above 100 at any time. The quinine had no effect upon the temperature.

Dr. Jewett : Most likely it was a case of acute septicæmia, and probably from the abdominal wound. The nurse would certainly be an easy explanation of the infection.

Dr. Dickinson: Is it frequent to find such rapid deaths from sepsis. I have recently lost a patient four days after operation from what was presumably sepsis that blazed out 15 hours after the operation and killed her in four days.

Dr. Jewett: I suppose all these cases come under the head of cases recognized as acute septicæmia. I think a good many deaths used to occur in that way in surgical procedures. I remember a case of death in three or four days—two, in fact, operative cases of my own—some years ago. I think that was a very common experience in pre-antiseptic times, not so now.

Dr. Dickinson: What is Dr. Jewett's experience in regard to patients presumably in fairly good condition at the time of operation and who would be expected to resist the toxæmia for a week or ten days, where the temperature is not unduly high and drops for a number of hours, and yet the virulence of the poison kills within three days, as in Dr. Law's case, or in three days in any case?

Dr. Jewett: I certainly do not believe them very common, and yet there are cases where the patient is overwhelmed before there is time for any organic lesion to develop as the result of sepsis.

Dr. L. G. Baldwin: I recall two cases of septic infection where the patients died. The infection was very severe. One was a trachelorrhaphy and the other the enucleation of a small fibroma from the cervix, and within 48 or 72 hours after the operation both died. My experience with septic infection is that if the symptoms do not come on the first 24 hours, after that they have a better chance of recovery, under proper treatment.

Dr. Jewett: The prognosis is certainly worse the earlier the sepsis is developed, but I think it is the experience of most of us that the time sepsis usually begins after labor is about the third day. It begins more frequently toward the end of seventy-two hours, but I think many die in whom sepsis begins as late as the end of the third day.

Dr. Baldwin: I was thinking more of operative cases than obstetric cases. I think there is a difference in the virulency of the infection.

Dr. Jewett: It is possible that obstetric cases are not likely to show infection so soon, and yet if the uterus is infected during the labor and septic material is left there, I see no reason why it should not develop as soon as in operative cases. You have a wound equivalent to an operation wound, but not so liable perhaps to absorb as a clean cut incision.

Dr. Langstaff: It is not commonly believed to arise after labor without any particular cause. In this case could sepsis have developed from the pus already there?

Dr. Jewett: It would put the system in a bad condition to resist sepsis. I think the most probable assumption is that the pus was carried from the fistula to the vulva.

Dr. Gordon: I think in puerperal septicæmia the source of contagion is more often with the nurse than we are apt to think. If Dr. Law could get at the facts he might find that the nurse had bathed the wound in the abdomen and vulva with the same cloth. I think we do not look after the nurses as closely as we should. A doctor may be ever so careful and yet get the credit of infecting his patient, when the nurse really does it.

Dr. Dickinson: In what detail a nurse has to be watched is shown by an occurrence recently in our wards under a very good nurse, who had gone in under the disadvantage of having full charge alone before she could be broken into our routine methods. A baby at the fifth day was found with a temperature of $102^{4}/_{5}{}^{\circ}$, cyanotic, somewhat dull and heavy, looking as if it had but a few hours to live. The history was that it had had no temperature rise until that day, that it had refused the breast and whined and fretted for two days, but had no gastro-intestinal disturbance. In hunting for a possible cause, we of course looked at the navel. The cord had fallen off early. The navel had received a dry dressing of aristol, the dressing adhered, filled in the depression, and it smelled perfectly sweet. The nurse had not soaked off that dressing for two days in the bath, and had not received instructions, and had not read the printed instructions. On lifting the scab there was a pus cavity with a dozen drops of slightly fœtid pus. This was washed out and the baby given a bath at a temperature of 98° for ten minutes, and the temperature promptly fell and did not rise thereafter. It was a concealed cavity hidden in the hollow of the navel, due to the fact that the nurse had not been told that she must soak off the dressing every day and wash out the sloughing wound the same as any other suppurating cavity.

Dr. Jewett: If that experience had occurred in the first few days you probably would have had a phlebitis; after the vessels are obliterated the danger is not so great.

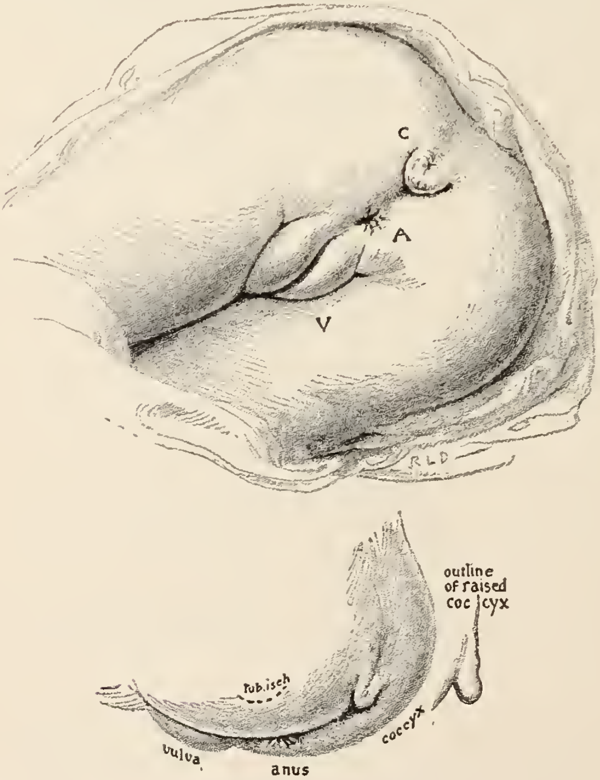
Dr. Dickinson: The child made a prompt recovery and was discharged well.

Dr. Dickinson reported a case of

A CHILD WITH A TAIL.

He was called to see a case of impacted breech, by Dr. E. D. Page. The patient, a healthy multipara, had had six children, with some difficult labors. The breech having entered the pelvis, and making no progress, the doctor started to make a thorough examination to ascertain the cause of the delay. He located the coccyx very readily, and was surprised to find it so sharp that a light touch against it pushed through the membranes as a sharp finger-nail would have done. The early rupture of the membranes may have delayed the labor, as dilatation was incomplete at the time. They delivered the child without great difficulty. It was a well-developed female of between five and a half and six pounds in weight.

The coccyx was covered with skin on both anterior and posterior surfaces. It thus formed a tail of the size of the nail of the little finger, with a length of nearly $^{3}/_{16}$ inch on the inner surface, and $^{3}/_{8}$ inch on the rear surface. This little tip could be raised away from the skin, and it slowly sank back.



Skin-covered coccyx, forming a rudimentary tail, in a female child at birth. C, coccyx; A, anus; V, vulva.

The coccyx is one of the vestiges of our animal ancestors, if we are to believe in evolution, and this case presents an example, perhaps, of a reversion to the older type. We are familiar with the caudal projection of the human fœtus that is like that of the animal. We see in the dissecting room, at times, the vestiges of the tail muscles inserted into the coccyx. We know of a group of other vestigial records of a former state of things. Briefly, these are: 1. The plica semi-lunaris as a vestige of the nictitating membrane of certain birds. 2. The pointed ear, or the turned down tip of the ear of many men. 3. The atrophied muscles, such as those that move the ear, well developed in certain people, or that shift the scalp, resembling the action of the horse in ridding himself of flies. 4. The supra-condyloid foramen of the humerus. 5. The vermiform appendix. 6. The location and direction of the hair on the trunk and limbs. 7. The dwindling wisdom teeth. 8. The feet of the fœtus, strongly deflected inwards, as in the apes, and persisting in the early months of life, together with great mobility, and a distinct projection of the great toe, at an angle from the side of the foot. 9. The remarkable grasping power of the hand at birth, and for a few weeks thereafter, that permits young babies to suspend the whole weight on a cane for a period varying from a half to two minutes. For an interesting illustrated account of these things, one should read Romanes' "Darwin and After Darwin," Open Court Pub. Co., Chicago.

I understand that at some future time Dr. Page will report the case in detail with photographs, but he is willing to let me offer this brief outline.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The following is the preliminary programme of the American Electro-Therapeutic Association, which will hold its Fourth Annual Meeting at the New York Academy of Medicine, New York, September 25th, 26th and 27th.

President's address:—Dr. W. J. Herdman, Ann Arbor, Mich., Professor of Diseases of the Mind and Nervous System, and Electro-Therapeutist in the University of Michigan.

REPORT OF COMMITTEES ON SCIENTIFIC QUESTIONS.

On Standard Coils—Dr. W. J. Morton, New York.

On Standard Meters—Dr. Margaret A. Cleaves, New York.

On Standard Electro-Static or Influence Machines—Dr. W. J. Morton, New York.

On Constant Current Generators and Controllers—Dr. W. J. Herdman, Ann Arbor, Mich.

On Standard Electrodes—Dr. A. Lapthorn Smith, Montreal.

Stand and Electrode for Static Electricity, Exhibit of same—Dr. Lucy Hall-Brown, Brooklyn. N.Y.

On Electric Light as a Therapeutic and Diagnostic Agent—Dr. Margaret A. Cleaves, New York.

THE CONSTANT CURRENT.

Physics, Current Distribution—Mr. W. J. Jenks, M.I.E.E., New York.

Physiological Effects—Prof. H. E. Dolbear, President Tuft's College, Boston, Mass.

Therapeutic Uses, General—Dr. A. D. Rockwell, New York.

Gynæcology—

The Galvanic Current in Catarrhal Affections of the Uterus—Dr. G. Betton Massey, Philadelphia.

Suites éloignees du traitement electrique conservateur Gynæcologie Grossesses Consecutives—Dr. Georges Apostoli, Paris.

Metallic Electrolysis—M. le Docteur Georges Gautier, Paris.
Dr. W. J. Morton, New York.
Dr. Margaret A. Cleaves, New York.
Dr. A. H. Goelet, New York.

Treatment of Urethral Stricture, Report to date—Dr. Robert Newman, New York.

Diseases of the Eye, Electro-Therapeutics of—Dr. L. A. W. Alleman, Brooklyn, N.Y.

Notes on Goitre and Improvements in Apparatus for Treatment of same—Dr. Chas. H. Dickson, Toronto.

Diseases of the Throat—Dr. D. S. Campbell, Detroit, Mich.

The action of Electricity on the Sympathetic—Dr. A. D. Rockwell, New York.

Diseases of the Nervous system—The treatment of Neuritis by the Galvanic and Faradic Currents—Dr. Landon Carter Gray, New York.

Electric Sanitation—Prof. John W. Langley, Ph. D., Case School of Science, Cleveland, O.

Physics of the Electric Light in Relation to Organized Matter—Prof. John O. Reed, Ph. M., Asst. Prof. of Physics, University of Michigan.

Hydro-Electric Methods, Physics and Appliances—Mr. Newman Lawrence, M.I.E.E., London.

Special Hydro-Electric Applications—Dr. Margaret A. Cleaves, New York.

The Hydro-Electric Therapeutics of the Constant Current—Dr. W. S. Hedley, Brighton, England.

INDUCTION CURRENTS.

Interrupted Currents, Physics—

Physiological Effects—Dr. W. J. Engelman, St. Louis, Mo.

Therapeutic Uses, General, General Faradization—Dr. A. D. Rockwell, New York.

Gynæcological—Dr. A. H. Goelet, New York.
Dr. H. E. Hayd, New York.
Dr. A. Lapthorn Smith, Montreal.

SINUSOIDAL CURRENT.

Physics—Mr. A. E. Kennelly, F.R.A.S., Philadelphia.

Physiological Effects—Dr. W. J. Herdman, Ann Arbor, Mich.
Dr. J. H. Kellogg, Battle Creek, Mich.

Therapeutic Uses—Dr. Margaret A. Cleaves, New York.
Dr. Wm. Jas. Morton, New York.
Dr. J. H. Kellogg, Battle Creek, Mich.
Dr. Holford Walker, Toronto.
Dr. A. H. Goelet, New York.

Le Courants Alternatifs; leur transformation; leur mesure et leurs applications therapeutiques—M. le Docteurs Gautier et Larat, Paris.

On the Sinusoidal Current Method of Regulation, the E. M. F. and Resultant Current—Dr. Lucy Hall-Brown, Brooklyn, N.Y.

STATIC AND STATIC INDUCED.

Physics—Prof. Edwin Houston, Ph. D., Philadelphia.

Physiological Effects—

Therapeutic Uses, General Therapeutic Uses—Dr. Wm. Jas. Morton, New York.

The Treatment of Chorea—Dr. D. R. Brower, Chicago.

Static Induced—Dr. Margaret A. Cleaves, New York.

High Frequency Currents Derived from Static Machines as per Method d'Arsonval—Dr. J. H. Kellogg, Battle Creek, Mich.

IN MEMORIAM.

Dr. Wm. F. Hutchinson, Providence, R. I.
Dr. John Chambers, Indianapolis, Ind.
Dr. Robert Newman, New York.
Dr. Plymon S. Hayes, Chicago.
Dr. W. J. Herdman, Ann Arbor, Mich.

MARGARET A. CLEAVES, M.D.,
Secretary.

68 Madison Ave., New York.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,
Professor of Obstetrics, L. I. College Hospital.

SUGAR AS AN OXYTOCIC.

Dr. L. Bossi, of Genoa, finds that sugar possesses the power of stimulating the uterine contractions. About an ounce of sugar is given dissolved in water. Its effect on the pains during labor is usually manifest in from 25 to 45 minutes. Rarely a second dose is required. The contractions induced by the ingestion of sugar are of the usual normal character.

A NEW METHOD OF SYMPHYSEOTOMY.

Fenomenow (La Semaine Medicale, Feb. 9, '94) proposes to preserve permanently the new diameters obtained by symphyseotomy. Experiments upon the cadaver and on animals lead him to believe the attempt would prove successful in the human subject. He suggests either of two methods, as follows :

1st. A semilunar incision is made through the skin of the pubic region, extending from a point situated internally to the external abdominal ring on one side, about a finger's breadth above the level of the upper border of the pubic bones, to the corresponding point on the opposite side, the lowest part of the incision touching the inferior border of the symphysis pubis. The flap of skin having been raised from the subjacent muscles the remaining soft structures are incised from above downwards and from without inward, about an inch on either side of the middle line of the symphysis pubis, in such a manner as to include a triangle, the base of which is formed by the upper border of the symphysis, while the apex corresponds to the sub-pubic ligament.

The periosteum having been detached from the bone, a wedge-shaped piece is cut out of the two pubic bones with the chisel or the chain saw, the apex of the wedge being likewise directed downwards so as to include the inter-articular fibro-cartilage. The arciform or sub-pubic ligament is then divided if necessary ; the ligament being left entire in cases in which it offers no obstacle to the separation of the pubic bones. This part of the operation is completed by plugging the wound with iodoform gauze, after which the extraction of the uterine contents is proceeded with. After delivery the periosteum is carefully detached with a scraper from the lower half of the wedge-shaped piece of bone, the denuded portion of which is excised. The detached periosteum is brought down upon the cut surface of the quadrilateral piece of bone left after excision of the lower half of the wedge, while the latter is made to slide down upon the cut surfaces of the pubic bones so that the lower side of the bony trapezium comes to form the interior border of the symphysis, which is thereby reduced to half its original height seeing that its upper border is now formed by the upper side of the bony trapezium. The distance between the two pubic bones after the operation varies from 4-5 of an inch to an inch according to the breadth of the bony wedge.

2d. The skin incision is the same as in the first method, but instead of cutting a wedge-shaped piece out of the pubic bones the latter are divided vertically from their upper border as far down as a point on a horizontal plane with the centre of the symphysis, the two vertical incisions being subsequently united by a horizontal cut. In this way a rectangle of bone and periosteum is obtained, the horizontal sides of which are from 1 3-5 to 1 4-5 inch long, while the vertical sides are equal to half the height of the symphysis. The quadrangular piece of bone having been detached and turned upwards, symphyseotomy is performed according to the ordinary method by dividing the lower half of the symphysis pubis. The wound is then plugged with iodoform gauze. After delivery the rectangular bony segment formed by the upper half of the symphysis pubis is made to slide in between the articular surfaces of the lower half of the pubic bones previously deprived of their fibro-cartilaginous lining.

To insure stability, the displaced segment is wired in its new position and fixed to the remainder of the pubic bones on either side with steel pegs. It is possible, however, that silk or catgut may answer the purpose.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Surgeon, Brooklyn Eye and Ear Hospital; Visiting Ophthalmologist, Kings County Hospital

THE PATHOLOGICAL ANATOMY OF TRAUMATIC ANIRIDIA AND IRIDODIALYSIS.

Wintersteiner (Graefe's Arch. f. Oph., xl., 2, p. l.) While many clinical reports of cases of aniridia and traumatic iridodialysis have been published, there are but few records of the pathological examination of such cases. This is doubtless due to the scarcity of material, and the description of four cases by Wintersteiner is a welcome addition to those of Treitel and Schaefer. In such cases there is usually partial or complete scleral rupture, and often rupture of the conjunctiva with prolapse of iris or ciliary body. Prolapse of the iris which may have been completely or partially separated from its ciliary attachment is probably due to the sudden escape of the aqueous contained in the posterior chamber. As this ciliary attachment of the iris is relatively weak, the author does not believe that the prolapsing iris could draw the ciliary body with it, but rather holds that the ciliary prolapse when it occurs is due to the pressure of a dislocated lens and vitreous toward the scleral wound, perhaps aided by an unusual firmness of the zonula. The suspensory ligament thus prevents the immediate escape of the lens which presses the ciliary body before it. An extensive scleral rupture usually means the escape of the lens from the eye, but cases of iridodialysis have been recorded in which the lens was not dislocated and did not even become cataractous. The iris usually separates at its periphery without remaining stump, and Wintersteiner believes that in traumatic aniridia the separation usually occurs before the opening of the globe, the iris being thus partially or completely washed out of the eye by the escaping aqueous. Manolescue (Arch. d'Oph., 1885, v. 3) claims that the first step is the perforation of the globe, and the second iris prolapse, the incompressible aqueous then pushing the iris before it and tearing it from its ciliary attachment. With the separation of the iris there is usually rupture of the ligamentum pectinatum, which may extend far enough to reach into the canal of Schlemm. Rupture of the sclera may be complete or only partial, involving either the inner or outer layers. In this respect Wintersteiner's cases confirm the belief that the elasticity of the outer scleral layers is greater than that of the inner. Partial incarceration of a partially separated iris may simulate multiple iridodialysis.

Healing of the iris wound may occur with or without any considerable connective tissue development. It is interesting to note the often marked hæmorrhage accompanying iridodialysis, whereas an ordinary iridectomy is usually a bloodless operation. The reasons for this are apparently the following: in iridectomy an iris stump is always left, which means that the iris vessels are cut at a point where their calibre is already somewhat reduced, whereas dialysis means separation close to their origin, and one can easily conceive of a laceration either partial or extending along rather than across the vessel, both of which would favor free bleeding. Schaefer adduces as the chief reason for hæmorrhage a traumatic vascular paralysis, but profuse hæmorrhage has occurred in cases of operative removal of the entire iris where the only traumatism was the seizure of the iris with the forceps, and this occurs equally in iridectomy. Wintersteiner believes the real cause of this hæmorrhage to be in the laceration of the canal of Schlemm, and of the circulus art. iridis major. Such bleeding is naturally favored by the vascular congestion incident to reduced intra-ocular tension with contraction of the venous outlets by the elastic fibres of the sclera.

IODINE INJECTIONS INTO THE VITREOUS OF DOGS.

Wolff (Graefe's Arch. f. Oph., xl., 2, p. 1.) reports the results of twelve experiments of this kind made practically in accordance with Schoeler's suggestion in the treatment of retinal separation. In ten of these cases retinal separation resulted from the injection usually in consequence of vitreous contraction. Adhesive inflammation did occur at the seat of puncture, but the detachment elsewhere and the often very extensive chorio-retinal inflammation and degeneration give but small encouragement to the adoption of Schoeler's method, even allowing for differences between the human eye and that of the dog. Where the preservation of sight is concerned one should be very chary about introducing chemically different substances into the vitreous. Of course injections to control infectious processes are of an entirely different class.

LOCAL USE OF QUININE IN BLENORRHŒA.

Reich-Hollender (Knapp's Archives of Oph., 1894, p. 30) believes that quinine in solution is a "specific in the ravages of the gonococcus." He has used the following prescription with good results in a number of cases:

℞	Quin. sulph.	2
	Acid. muriat. dil.	0.75
	Aq. dest.	180.
	M. et ft. sol.	

Sig. Shake well and use as eye wash every hour.

With this may be combined the nasal insufflation of quinine in powder three times a day, especially where there is any involvement of the lachrymal sac. The customary use of cold, nitrate of silver and mydriatics or myotics p. r. n. was at the same time pursued, so that the real value of the quinine as a factor in the author's successes is not certain. Still it is easy to credit such an effective germicide as quinine with good results in this class of cases. Quinine has long been recommended in diphtheritic conjunctivitis.

MISCELLANEOUS.

We quote the following from an editorial in the *New York Times* :

"H. Hitchcock, M.D., writes to us from the executive office of the Anti-Vaccination League to ask a candid question, to which we will give a candid answer. 'Are you willing,' he asks, 'to open your columns to a discussion of the question of vaccination?' We reply : 'No,' for it would not be worth the doctor's while nor ours. There is at the present day no question of vaccination except in the minds of the members of anti-vaccination leagues—gentlemen and ladies who are engaged with perfect sincerity, we have no doubt, in a futile attempt to head off human progress and to reopen a question about which pretty much all the world has made up its mind. The appeal of the American Anti-Vaccination League is, in our judgment, an appeal to ignorance and prejudice."

WHALE'S MILK.

The following article appeared several years ago in the *Rockland* (Maine) *Courier-Gazette* :

Whale's milk is now highly recommended for certain diseases. The only difficulty that we can see in carrying out the idea is in getting the milk. Who will milk the whale? Nobody has ever tried it, and it is not known whether or not the moral nature of the whale will permit such liberties being taken. Of course if you could get a whale of good disposition, one that is kind and affectionate by nature, there would be no difficulty; but suppose you run across a whale that is vicious, and just as you get a pail full of milk she flaps her tail around and catches you in the eye, and then steps in the pail? Though, come to think of it, a whale couldn't step in the pail, because she hasn't any feet—but we don't know as that makes any difference, either, for a yardstick has three feet and it can't step in a pail. But really and truly, and no joking, we don't see how this whale-milk industry is to be cultivated. Suppose a man wants to go into it for a speculation, and he advertises in advance that he will supply whales' milk to all kinds of invalids at lowest prices, with reduced rates to clubs. It will be his object, of course, to keep a stock of thoroughbred whales, though grades would not be undesirable. In order to get the best stock, he would have to send a vessel after his whales and lassoo a brood in their watery fastnesses. Then he'd tow them into port. Then the only way they could be milked, as it looks to us, would be by a diver, and, as sure as you live, if a stranger went poking around a whale in a suit of diving armor, he'd be certain to tickle her, and that would make her laugh, which would be liable to curdle the milk. But how could he milk into a pail under water? The water would run into the pail in that case as freely as it does in ordinary milking on land, and the result would be milk like that in every-day use, with possibly not quite so much water. Nobody is more friendly than we to new industries of this character, and we are glad to encourage anything that will ameliorate the condition of invalids, but the whale-milk business strikes us as being a trifle far-fetched. Better leave the whale to furnish stiffening for women's dress waists, and let its milk accomplishments remain uncultivated.

INFECTIOUS DISEASES.—PERIODS OF INCUBATION, QUARANTINE AND INFECTION, AND SOURCES OF INFECTION.

The following summary is condensed from Dr. L. F. Parkes's recent "Handbook of Infectious Diseases."

DIPHTHERIA.

Incubation Period: least, unknown; average, two days; greatest, seven days.

Quarantine Period: seven days from last exposure to infection.

Infective Period: from the beginning of symptoms, for the whole period of illness.

Sources of Infection: 1. From a previous case, acute or convalescent. 2. From a case of apparently simple tonsillitis. 3. From a case of apparently simple nasal ulceration or ozæna. 4. From domestic animals (cats, pigeons or fowls) suffering from a throat affection of a diphtherial nature. 5. From cows' milk, by human affection of the milk in the cow-sheds and dairies, etc. 6. From fomites, that is, infected bedding, clothes, carpets, curtains, books, toys, cups, spoons, forks, etc. 7. From a person who has been in contact with a diphtheria patient, but who has not himself contracted the disease. 8. From defective sanitary conditions; these are probably merely predisposing causes engendering morbid conditions of the tonsils favorable to the growth of diphtheria contagion when implanted thereon.

SCARLET FEVER.

Incubation Period: less than twenty-four hours; average, one to three days; greatest, seven days.

Quarantine Period: seven days from last exposure.

Infective Period: from earliest appearance of symptoms, till all desquamation has ceased.

Sources of Infection: 1. From a previous case of scarlet fever, acute or convalescent. 2. From a case of sore throat without discernable rash, but merely a mild form of the disease. 3. From cows' milk, either by human infection of the milk in cow-sheds and dairies, or during the milking, or from a diseased condition of the cows. 4. From fomites. Infection may be carried by persons who are not themselves sufferers, if they have been in contact with patients.

MEASLES.

Incubation Period: from exposure to infection to onset of illness; least, four days; average, nine to ten days; greatest, fourteen days. From exposure to infection to appearance of rash; least, seven days; average, fourteen days; greatest, eighteen days.

Quarantine Period: fifteen days from last exposure to infection.

Infective Period: from earliest appearance of symptoms till convalesence is well established. The catarrhal stage preceding the eruption is very infectious.

Sources of infection: 1. From a previous case of measles. 2. From fomites.

MUMPS.

Incubation Period: least, fourteen days; average, twenty-one days; greatest, twenty-five days.

Quarantine Period: twenty-five days from last exposure to infection.

Infective Period: from onset of prodromal stage for two or three weeks subsequent to appearance of parotitis. The chance of infection diminishes progressively from the onset of the disease.

Source of Infection: 1. From a previous case. 2. From fomites.

GERMAN MEASLES.

Incubation Period: least, five days; average, eighteen days; greatest, twenty-one days.

Quarantine Period: twenty-one days from last exposure to infection.

Infective Period: from onset of prodromal stage to cessation of desquamation.

Sources of Infection: 1. From a previous case. 2. From fomites.

INFLUENZA.

Incubation Period: less than twenty-four hours; average, three to four days; greatest, five days.

Quarantine Period: five days from last exposure to infection.

Infective Period: from earliest onset of symptoms till convalescence is well established.

Sources of Infection: 1. From a previous case of influenza. 2. From fomites.

WHOOPING-COUGH.

Incubation Period: least, seven days; average, not determined; greatest, twenty-one days.

Quarantine Period: twenty-one days from last exposure to infection.

Infective Period: the whole period of illness from onset of earliest catarrhal symptoms.

Sources of Infection: 1. From a previous case of whooping-cough. 2. From fomites.

SMALL-POX.

Incubation Period: least, nine days; average, twelve days; greatest, fifteen days.

Quarantine Period: fifteen days from last exposure to infection.

Infective Period: from the onset of initial symptoms till all scabs have been removed. The period of greatest infectivity is during the acute stage (vesicular and pustular). During the initial illness and until the appearance of the rash the liability to impart infection is not great.

Sources of Infection: 1. From a previous case of small-pox. 2. From fomites. Infection can be carried by a person who has been in contact with a small-pox patient, but who is not himself a sufferer from the disease. 3. Proximity to small-pox hospital containing numerous cases in the acute stage.

CHICKEN-POX.

Incubation Period: least, thirteen days ; average, fourteen days; greatest, nineteen days.

Quarantine Period : nineteen days from last exposure to infection.

Infective Period : from appearance of eruption till this has completely disappeared.

Sources of Infection : 1. From a previous case. 2. Fomites. The infection may be carried by those who have been in contact with the disease.

TYPHOID FEVER.

Incubation Period : least, eight days ; average, twelve to fourteen days ; greatest, twenty-three days.

Quarantine Period : twenty-three days from last exposure to infection.

Infective Period : the excreta are infectious through the whole course of the disease and until convalescence has been established at least a fortnight.

Sources of Infection : 1. Water, food or air contaminated by the specific virus contained in the excretions of a typhoid-fever patient. 2. Fomites. Infection may persist for several weeks in infected clothing and bedding shielded from exposure to light and air.

TYPHUS FEVER.

Incubation Period : average, seven days.

Quarantine Period : fourteen days from last exposure to infection.

Infective Period : from beginning of illness till convalescence.

Source of Infection : from a previous case of the disease. Fresh air and free ventilation rapidly destroy the virulence of the contagion. Fomites probably do not propagate the contagion.

ASIATIC CHOLERA.

Incubation Period : least, a few hours ; average, one to two days ; greatest, ten days.

Quarantine Period : ten days from date of last exposure to infection.

Infective Period : from earliest onset of symptoms till complete recovery.

Sources of Infection : 1. From water, food and air contaminated with the discharge of a person suffering from cholera. 2. From fomites. 3. There is reason to believe that the virus contained in the excreta at the time of leaving the body of a patient and for a short period afterward, is in a less active condition and more easily destroyed by chemical agents than after such excreta have been exposed for a short time to contact with the air.

NEW YORK HEALTH DEPARTMENT.

No. 301 Mott Street.

INFORMATION FOR CONSUMPTIVES AND THOSE LIVING WITH THEM.

Consumption is a disease which can be taken from others and is not simply caused by colds. A cold may make it easier to take the disease. It is usually caused by germs which enter the body with the air breathed. The matter which consumptives cough or spit up contains these germs in great numbers—frequently millions are discharged in a single day. This matter, spit upon the floor, wall or elsewhere, is apt to dry, become pulverized and float in the air as dust. The dust contains the germs, and thus they enter the body with the air breathed. The breath of a consumptive does not contain the germs and will not produce the disease. A well person catches the disease from a consumptive only by in some way taking in the matter coughed up by the consumptive.

Consumption can often be cured if its nature is recognized early and proper means are taken for its treatment. *In a majority of cases it is not a fatal disease.*

It is not dangerous for other persons to live with a consumptive, if the matter coughed up by the consumptive is at once destroyed. This matter should not be spit upon the floor, carpet, stove, wall, or street, or anywhere except into a cup kept for that purpose. The cup should contain water, so that the matter may not dry, and should be emptied into the closet at least twice a day and carefully washed with hot water. Great care should be taken by a consumptive that his hands, face and clothing do not become soiled with the matter coughed up. If they do become soiled they should be at once washed with hot soap and water. When consumptives are away from home, the matter coughed up may be received on cloths, which should be at once burned on returning home. If handkerchiefs are used (worthless cloths which can be burned are far better) they should be boiled in water by themselves before being washed.

It is better for a consumptive to sleep alone, and his bed-clothing and personal clothing should be boiled and washed separately from the clothing belonging to other people.

Whenever a person is thought to be suffering from consumption, the name and address should be sent at once to the Health Department, on a postal card, with a statement of this fact. A medical inspector from the Health Department will then call and examine the person to see if he has consumption, providing he has no physician, and, if necessary, will give proper directions to prevent others from catching the disease.

Frequently a person suffering from consumption may not only do his usual work without giving the disease to others, but may also get well, if the matter coughed up is properly destroyed.

Rooms that have been occupied by consumptives should be thoroughly cleaned, scrubbed, whitewashed, painted or papered before they are again occupied. Carpets, rugs, bedding, etc., from rooms which have been occupied by consumptives, should be disinfected. The Health Department should be notified, when they will be sent for, disinfected and returned to the owner free of charge, or, if he so desires, they will be destroyed.

By order of the Board of Health,
Charles G. Wilson, *President.*
Emmons Clark, *Secretary.*

NEW BOOKS AND BOOK NOTICES.

All books received by the Journal *are deposited permanently in the Library of the Medical Society of the County of Kings.*

The Pharmaceutical Era.

The Era published its May 1st number under the title of "Moving Day Number." Among the many articles which it contains is a description of the manufacturing establishment of the well-known firm of Frederick Stearns & Co., at Detroit, Michigan. Those who are interested in the details of a large drug manufactory will take pleasure in following a description of the crude drugs as they enter the factory until they emerge as finished products.

W. B. Saunders, Medical Publisher, announces that he has in *active preparation* A New Aid Series of Manuals for Students and Practitioners.

As publisher of "Standard Series of Question Compends," together with an intimate relation with leading members of the medical profession, Mr. Saunders has been enabled to study, progressively, the essential desideratum in practical "self-helps" for students and physicians.

This study has manifested that, while the published "Question Compends" earn the highest appreciation of students, whom they serve in reviewing their studies preparatory to examination, there is special need of thoroughly reliable hand-books on the leading branches of Medicine and Surgery, each subject being compactly and authoritatively written, and exhaustive in detail, without the introduction of cases and foreign subject matter which so largely expand ordinary text-books.

The "Saunders' Aid Series" will not merely be condensations from present literature, but will be ably written by well-known authors and practitioners, most of them being teachers in representative American Colleges. This new series, therefore, will form an admirable collection of advanced lectures, which will be invaluable aids to students in reading and in comprehending the contents of "recommended" works.

Each Manual, comprising about 250 pages (5½x8 inches), will further be distinguished by the beauty of the new type, by the quality of the paper and printing, by the copious use of illustrations, by the attractive binding in cloth, and by the extremely low price, which will uniformly be $1.25 per volume.

A Practical Treatise on Medical Diagnosis for Students and Physicians. By John Musser, M. D., Assistant Professor of Clinical Medicine in the University of Pennsylvania, etc. (With two colored plates) Philadelphia, Lea Brothers & Co., 1894. Pp. 881. Price $5.00.

That a great need exists for these aids in accurate diagnosis that lie outside of the text-books upon medicine is evidenced by the large number of works upon the subject of Medical Diagnosis. In general these may be classed into two large groups, the first, in which the instruments of precision are more prominently brought into use, as the microscope, the hæmoscope, etc., to which type von Jaksch's work belongs and is perhaps the standard, and a second type that embodies a mixture of clinical observations or minutiæ of observation combined with the general use of the more exact instrumental accessories, to this second class this work seems to the reviewer a valuable addition.

The opening chapters upon general diagnosis are clear and logical and although there is little new, what is stated seems to be well put. The chapter upon bacteriological diagnosis is too short for any service and illustrates as markedly as any other chapter a great fault of the book, *i.e.*, too much has been attempted and in consequence a hybrid of a practice of medicine, a work upon diagnosis with a few short chapters upon instrumental aids to diagnosis has been produced. The book we feel however to be a good one, not in advance of some recently translated European volumes upon much the same subjects, but offering information from a different point of view. S. E. Jelliffe.

Transactions of the Royal Academy of Medicine, in Ireland. Volume XI. Edited by William Thomson, M.A., F.R.C.S. Dublin: Famin & Co., 1893, pp. 518.

This volume contains a list of officers, fellows and members, and forty-five papers on a great variety of subjects in all the departments of medicine Among these we may note: The treatment of pulmonary consumption in special hospitals and dispensaries; on the diagnostic value of the Diazo reaction; Esthlander's thoracoplastic operation; arrest of development in intra-uterine life; movable kidney; the nature of the work of the kidney as shown by the influence of atropine and morphine upon the secretion of urine.

The National Dispensatory. Fifth Edition, with 320 Illustrations. Philadelphia: Lea Brothers & Co., 1894; pp. 1903; price $8.

The National Dispensatory contains the natural history, chemistry, pharmacy, actions, and uses of medicines, including those recognized in the pharmacopœias of the United States, Great Britain and Germany, with numerous references to the French Codex. As compared with previous editions the alterations and additions in this are very great, as would naturally be expected, when it is remembered that the new United States Pharmacopœia has been so thoroughly changed. The new synthetic remedies and drugs which, though unofficial, are largely in use, are also considered at sufficient length. The volume is unique in medical literature, and its usefulness is equal to that of any other book in the library of a physician or pharmacist.

The Physician's Wife; and the Things that Pertain to Her Life. By Ellen M. Firebaugh. With portrait of author and forty-four photo-engravings of original sketches. In one Crown Octavo volume of 200 pages. Extra cloth, $1.25 net. Special limited edition, first 500 copies, numbered, and printed in photo-gravure ink on extra-fine enamelled paper; bound in half-leather and vellum cloth, $3.00 net. Philadelphia: The F. A. Davis Co., Publishers, 1914, and 1916 Cherry Street.

A very interesting account of the life of a physician's wife, which as every married member of the profession knows, is full of varied experiences. It will be pleasant reading for the summer months when practice is dull and the mind disinclined to heavier literature.

LECTURES ON AUTO-INTOXICATION IN DISEASE; OR SELF-POISONING OF THE INDIVIDUAL. By Ch. Bouchard, Professor of Pathology and Therapeutics, Member of the Academy of Medicine, and Physician to the Hospitals, Paris. Translated, with a Preface, by Thomas Oliver, M.A., M.D., F.R.C.P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, Newcastle-upon-Tyne; and Examiner in Physiology, Conjoint Board of England. 1894. In one Octavo volume; 302 pages. Extra cloth, $1.75 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

We know of no book that has appeared within recent years that is fuller of valuable food for thought than this. The subject is one which is comparatively new and upon which our literature is relatively meagre. That "the putrefactive processes which occur in the intestinal canal and the development of physiological and pathological alkaloids play an important part in many diseased processes until lately unknown or misunderstood," is all too true, as is also the statement that "Death frequently carries off in a few hours or days individuals who are in the prime of life and in apparent good health, and at whose post-mortem the most careful examination fails to reveal alterations of structure such as can explain the fatal stroke." One who wishes to gain an insight into these mysterious cases, and to understand auto-intoxication, whether through the urine or the bile, or from causes that lie in the intestine, as in typhoid fever, will in this volume find full information.

HOLDEN'S MANUAL OF THE DISSECTION OF HUMAN BODY. Edited by John Langton, Surgeon to and Lecturer on Anatomy at St. Bartholomew's Hospital, etc. Sixth edition, revised by A. Hewson, M.D., Demonstrator of Anatomy, Jefferson Medical College, etc. 311 Illustrations. Philadelphia: P. Blakiston Son & Co., 1894; pp. 803; price $3.

The first edition of Holden appeared in 1881, and from that time to the present it has held a position in the front rank of standard text-books on anatomy. One is apt to regard anatomy as a subject so settled that its description cannot vary much from year to year, and yet if this edition and the first are compared, the differences are so many and so marked that the resemblances can with difficulty be traced. The English editor and the American reviser have made many improvements and have brought the book up to date, both as to facts and methods.

ERASMUS DARWIN.

PETRUS PAAW.
MEDICINÆ PROFESSOR.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

THE INTRODUCTION OF SYMPHYSEOTOMY INTO AMERICA.

BY CHAS. JEWETT, M.D., Sc.D.

Referring to the article which appeared in the last number of the JOURNAL from the pen of Dr. R. P. Harris, it is of interest to note that the revival of symphyseotomy outside of Italy began with Pinard, of Paris. It is a singular fact that for a period of twenty-five years the good work that was being done by Morisani and his followers in Naples, received little or no recognition in other countries. Except in Italy, no symphyseotomy was performed during that time, and the operation was looked upon as obsolete. In our own country, Harris was almost the only obstetrical writer who recognized its utility. He sturdily defended its cause at a time when it was almost universally ignored by other authorities. His name will always hold a conspicuous place in the history of symphyseotomy and its introduction into America. Had American obstetricians given more attention to the facts which Harris repeatedly set before them, our country might have been first to profit by the lesson of the Neapolitan successes. Not until Spinelli, a disciple of Morisani, had visited Paris and demonstrated the operation upon the cadaver in the presence of Pinard, did symphyseotomy begin to gain general recognition outside of Italy. Pinard was immediately impressed with the value of the operation, and in February, 1892, he performed the first pubic section that had been done beyond the confines of Italy in more than a quarter of a century. In a little over a year he had operated in twenty cases. Freund, of Strasbourg, and Leopold, of Dresden, soon followed him, and symphyseotomy quickly spread over both hemispheres.

Unless, therefore, Coggin's claim, and others antedating Pinard's publication in the early part of 1892 are to be established we will be compelled to admit that symphyseotomy came to this country, as it did to Germany and England, by way of Paris, and Pinard will be entitled to a due share of 'the credit. But better evidence of these early operations will be required than the Coggin claim is founded on.

It is scarcely to be expected that the pioneer in progress in any special department of knowledge should be looked for on the frontier. He is usually to be found among men of specialized experience in the great medical centres. All the operations since that which has been claimed for Coggin have been done by experts. To such men we would naturally look for the first step in any new departure in the medical art.

Dr. Coggin's story bears on its face its own refutation. His report, as it appears in the American Journal of Obstetrics for January, 1894, makes the weight of the child 11.35 pounds, and its length $16\frac{3}{4}$ inches. In other words, the child weighed four pounds more and measured two or three inches less than the average. The bi-parietal diameter is put at 5.75 inches. That is the measure of the bi-parietal in a large-sized, adult male head. The fronto-mental diameter, however, was 3.55 inches, the usual value in the new-born child. Yet his figures purport to be exact to a small fraction. It will be noticed, by the way, that some of the doctor's fractions in weights and measures are unfamiliar ones. His appliances for determining pounds and inches must be something different from those in general use.

Dr. Harris says that he bases his acceptance of these early symphyseotomies on sworn affidavits. Is this the way scientific truths are established? Would a reputable physician in any community resort to such means to secure the recognition by his colleagues of his title to professional honor? Would he not rather, if anything more than his word were needed, appeal to his fellow practitioners. If he could not trust to this, would his allegations be worthy of credence under oath?

Finally, it will be difficult to set aside the findings of the official investigation published by the Medical Society of Etowah County, Ala., where Dr. Coggin practiced at the time of the alleged operation. After careful judicial inquiry into all the facts by a committee formally appointed for the purpose, their report was adopted by the Society and published in the Medical and Surgical Age of June last. Copies of the journal with full text of the report can no doubt be had on application to the office of publication, Anniston, Ala. The report was re-published in the N. Y. Jour. of Gyn. and Obs. for August last. A few extracts are herewith submitted:

"Dr. Coggin first announced that his pubic section was done in Freedman, Etowah County, Ala. The committee on diligent search were unable to find any such town in the State. Dr. Coggin afterward stated that the place where Mrs. Carey Hughes, the alleged patient, lived was Rocky Ford on Wills Creek. No person of that name had ever been heard of in that vicinity."

"The doctor claimed to have been assisted in the operation by Dr. Slaughter. Dr. C. J. Slaughter, of Aurora, Ala., is the only Dr. Slaughter who has ever been known in that entire region, and he denies that he assisted in an operation of the kind, or has heard of one in that section.

"Among the births reported to the health officer of the county by Dr. Coggin, no mention was made of the delivery of Mrs. Hughes."

"The President of the Society, Dr. E. T. Camp, of Gadsden, invited Dr. Coggin to be present at the June meeting to exhibit his patient, and to produce such other evidence as he might have to establish his claim. He was assured a fair hearing and official endorsement of his claims should he furnish proof of them. He failed to appear."

If any symphyseotomies antedating Pinard's are to be accepted, their authentication must be established on better evidence than the affidavits of alleged operators who do not command the respect and confidence of their professional associates.

A FURTHER CONTRIBUTION TO THE MICROSCOPICAL EXAMINATION OF THE BROOKLYN WATER SUPPLY.

BY SMITH ELY JELLIFFE, M.D.,
Instructor of Materia Medica, Botany and Pharmacognosy, N. Y. College of Pharmacy; Assistant Pathologist, Methodist Episcopal Hospital, Brooklyn.

In the following paper it is proposed to give a résumé of the work done during the year on the microscopical organisms found in the Brooklyn water as supplied through the taps at the house of the writer. In a previous article printed in the Brooklyn Medical Journal, October, 1893, there was given a résumé of the general methods of water analyses from the biological standpoint, the special work done upon the Brooklyn water supply, and extended tables of the organisms found weekly, from November 1, 1892, to May 1, 1893. The tables in the present communication extend the analyses to November 1, 1893, thus completing a period of twelve months. While this time is probably sufficient to give a comprehensive idea of the kinds of organisms present, it is a fact that has been brought out by the Massachusetts Board that a more extended time of examination is of value, for yearly variations in the character of the organisms present are observed as well as monthly variations, and it is only after a series of years that a knowledge of the normal conditions is to be obtained.

During the year there have been found 250 organisms in the Brooklyn water supply. Of this number 200 have been certainly identified and comprise 125 vegetable forms and 75 animal forms. Of the unidentified forms 15 were vegetable and 35 animal, making a total of 140 vegetable and 105 animal forms. In looking over the lists two points deserve comment: first, that of seasonal distribution, and second, that of importance to the physician and sanitarian when considering the special case.

The vegetable forms can be classified as follows: Cyanophyceæ (blue-greens), Diatomaceæ, Chlorophyceæ (grass-greens) including Desmids and the higher forms. It is to be remembered that the botanical classification of the lower forms is still in a transition period, and too set a rendering is more or less impossible.

The seasonal distribution of these Cyanophyceæ has been limited, and as these forms are held to be of some positive hygienic importance, a glance at the times of their occurrence is of interest. The only species of this class of plants whose abundance was of importance was that of a form resembling Clathrocystus [C. æruginosa?] This form made its first appearance during the early weeks in June; a few specimens had been seen the year before in October, but it was not until June 1st that the form appeared to stay; during June the number rose, and in July the forms were very plentiful, running up to 65-85 to the c.c., remaining constantly plentiful throughout July and August. The numbers gradually decreased to November, and later totally disappeared.

Of the Diatomaceæ eight forms occurred constantly, these belonging to the genera Synedra, Fragilaria, Asterionella Tabellaria, Melosira and Stephanodiscus. Of these Melosira (M. granulata) has been the most common and plentiful, always from 5-10 to the c.c., sometimes increasing and sometimes decreasing, a reference to the tables showing its gradual changes in frequency.

Asterionella (A. formosa) has been present throughout the entire period of examination; it has been scanty during the last period reported on in this place. As a general rule the diatoms have been present in greater numbers than any other form of life, and at no time have there been less than 10 forms present; the time of greatest prevalence was in the early winter and in early spring.

The seasonal distribution of the Desmids has been more marked than any other class of organisms; some have been in the water almost the entire year, but the time of greatest abundance during the year in question was in the late fall. At that time as many as 25 different forms were present in one example, whereas in the months of spring and summer their number fell noticeably down to 8-10 forms, and these remained constant. Of these constant forms Hyalotheca, Desmidium, Staurastrum [S. crenulatum] have been the most marked. S. crenulatum has been represented in more examinations than any other form, but always in very small quantities, less than one or two to a litre.

At no time could the number of desmids be regarded as excessive; the choice of forms has been extended, but the quantity has run along the lower lines.

Other forms of the Chlorophyceæ, as Rhaphidium, Scenedesmus, Dictyosphaerium and Pediastrum, have been represented almost throughout the entire year. Scenedesmus caudatus has been represented oftener than the other forms and in greater quantities. The species of Pediastrum have been constant, but always in comparatively small numbers. During June they became more numerous, but soon sank to a normal line. Of the plant miscellanies the latter half of the year has seemed to be less productive than the former, as but little of note has been found.

The animal forms, either from their smaller numbers, or delicacy that allows of their being broken up and lost in the transit of the pipes, were in the main much less numerous and far less constant than the vegetable forms. The rhizopods have been represented fairly constantly, but in very small numbers, by Arcella (A. vulgaris) and Actinophrys, the sun animalcule.

The numerous family of the infusoria presents one species, Dinobryon sertularia, as a constant find. Its numbers during the latter half of the investigation have been much decreased. A few new forms have been introduced, one of interest from its size and beauty, Ceratium, being of interest to the microscopist. A form similar to Uroglena volvox has been found in a few instances, but the writer is not prepared to maintain an absolute diagnosis of the identity of this species. Pleuromonas jaculans, the ever present organism during the winter months, was quite decreased in frequency and number during the latter term of examination.

One rotifer, Anurea cochlearis, has been frequent in occurrence during the latter half of the year; other forms noted in the first six months have recurred from time to time, but in small numbers; the greatest difficulty has been experienced in identifying various dead and fragmentary forms of this class which, undetermined, have been omitted from the list; else the representation of the year would have been fuller.

The crustacea have been but sparingly represented and in small numbers; fragments of limbs have been more common, and the probability is that many more forms could have been found, if it were not for the destructive influence of the conducting system.

During the latter half of the year little or no remains of higher animal forms have been found; animal epithelium has seemed to be absent as well as muscle fibres and differentiated cells of the higher types of animal life.

The second consideration that arises is whether, from the microscopical standpoint, any especially unhygienic conditions have been further revealed. There are undoubtedly places in the watershed where contamination to a greater or less degree can and does take place, and when viewed from the locality of contamination the results would seem to be necessarily dangerous to the health of a large community; but a limited amount of contamination is almost a necessity, and the practical question arises: is this contamination, regardless of its kind, in such excess to be perceived and appreciated by the microscopical examination? The present study would seem to indicate that but very little contamination has taken place.

In further detail, however, a résumé of the different factors, as presented in the light of our present knowledge of the conditions, is surely not out of place in a report of this character.

It has come to be regarded that the group of lower algæ, the Cyanophyceæ, are an unwholesome kind to be found in a water supply, especially as their life history and development call for just the character of conditions that are generally found in polluted or impure water supplies—and the presence of these organisms is, within general limits, one that should cause some degree of watchfulness on the part of the proper authorities. The Brooklyn water had been remarkably free from these forms up to the first week in June, when the genus Clathrocystus commenced to develop and become more or less common throughout the warm months; at no time, however, was the number sufficient to impart, to the writer's senses at least, the characteristic tastes and odors of the organisms when found in excess. Its presence, however, is well worthy of further study of the conditions that favored its development.

As already reported the desmids and others of the Chlorophyceæ have been very abundant and are excellent negative evidence of the contamination when taken in conjunction with the general results for this class of plants. The hygienic interest that attaches itself to the diatoms is mainly centered about the question of tastes and odors; this relationship has been most ably investigated by the Massachusetts Board, by Gary N. Calkins, the assistant biologist of the Board. It has been a very difficult matter to obtain reliable data for much original work in this line, and it is only intended here to name what organisms of this class are held to be objectionable and to *indicate* their comparative frequency. Asterionella is stated to yield a somewhat aromatic odor, and it has been common throughout the year.

Synedra, Tabellaria and Melosira are all worthy of consideration in this respect; and if unpleasant odors are found, especially of the class characterized as vegetable or grassy, we should look to these diatoms for explanation, in part at least.

Certain others of the animal kingdom, especially among the infusoria, can be regarded as reprehensible in this line of investigation. Synura, Volvox, Dinobryon, Cryptomonas and Bursaria are all to be kept in mind.

In the latter part of the preliminary report it was hinted that further investigations might show more extensive traces of stable and barnyard contamination as evidenced by the presence of the vegetable and animal remains of food stuffs and excrementitious products; the results, however, have tended to become more negative in a steady diminution of the number of such remains found. But in drawing conclusions from such evidence, the difficulty of exact diagnosis must be constantly kept in mind.

In conclusion—for the human mind seems to demand some kind of conclusions, even though they may belong to the realm of the more or less definite—it can be stated that from the microscopical standpoint the water, as examined, showed a condition of relative high purity, possessing inherent evidences of a healthy source and much negative and little positive evidences of contamination.—March 1, 1894.

VEGETABLE FORMS. Cyanophyceæ.	May 1, 1893.	May 8.	May 15.	May 22.	May 25.	June 1.	June 5.	June 12.	June 15.	June 19.	June 25.	July 2.	July 9.	July 16.	July 24.	July 31.	Aug. 6.	Aug. 13.	Aug. 21.	Aug. 28.	Sept. 3.	Sept. 8–10.	Sept. 17.	Sept. 24.	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.	Oct. 28.
Clathrocystus						Sc	Sc	Sc	Sc	F	C	F		C	Fx	F	Cx	F	Sc	Sc	F w	Sc	F		Sc	Sc		Sc	Sc
Merismopedia glauca																		Sc											
Oscillaria sp. indet		Sc							Sc																				
" limosa																													
" Froelechii			Sc																										
Diatomeæ.																													
Amphora ovalis									Sc	Sc																Sc			
Encyonema ventricosa		Sc	Sc		Sc				Sc		Sc								Sc										Sc
Stauroneis Anceps	Sc								Sc																Sc			Sc	
" Phœnicenteron								Sc																					
Navicula cuspidata	Sc							Sc																					
" dilatata																													
" gibba		Sc	Sc		Sc		Sc																						
" radiosa	Sc		Sc	Sc	Sc		Sc			Sc									Sc		Sc					Sc			
" rhyncocephala			Sc				Sc	Sc			Sc							Sc											Sc
" viridis																												Sc	
Pleurosigma Spenceri				Sc	Sc																								
Pleurosigma sp. indet		Sc		Sc														Sc								Sc			
Amphiprora ornata	Sc	Sc	Sc		Sc			Sc	Sc																				
Gomphonema acuminatum	Sc																												
" capitatum					Sc																								
Cocconeis Pediculus					Sc		Sc			Sc									Sc						Sc				
Eunotia lunaris				Sc																									
" tridentula				Sc			Sc																						
Synedra pulchella	Sc	Sc	Sc		C				Sc	Sc	Sc	Sc		Sc	Sc	Sc		Sc	Sc			Sc	Sc		Sc	Sc			
" ulna	Sc	Sc F	Sc	F	C	Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc			Sc	Sc	Sc	Sc		Sc	Sc		Sc	Sc			
Synedra (x)	Sc	Sc				F	Sc			Sc						Sc	Sc	Sc		Sc									Sc
Fragilaria capucina	Sc	Sc		Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc			Sc	Sc						Sc		Sc		Sc				
Asterionella formosa	Sc		Sc	A	A		Sc	Sc	Sc					Sc	Sc		Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc		Sc	Sc
Meridion circulare		Sc																											Sc
Tabellaria fenestrata	Sc	Sc	Sc	Sc		Sc		Sc	Sc	Sc	Sc	Sc		Sc	Sc		Sc					Sc	Sc		Sc				
" floculosa	Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc		Sc	Sc	Sc									Sc	Sc		Sc	
Nitzschia sp.																										Sc			
Surirella elegans		Sc																											
" splendida						Sc														Sc									
Cymatopleura solea										Sc																			Sc
Melosira granulata	F	F	C	F	F	C	Fx	C	Sc	Sc	C	F		C	F	F	C	Sc C	C	C	F	Sc	F x		F	F		F c	
" varians									Sc		Sc	Sc								Sc	Sc	Sc			Sc	Sc			Sc
Rhizosolenia gracilis		F	F			Sc	Sc	F		Sc	Sc															Sc			
Tessela interrupta																			Sc		Sc		F		Sc	Sc		F	Sc
Stephanodiscus minutus	Sc	Sc		F	Sc	Sc	F	Sc	Sc	Sc	Sc	F		F	F	Sc	Sc	Sc		Sc		Sc	Sc			Sc		Sc	
" niagareæ					Sc																								
Cyclotella compta					Sc				Sc																				
Cymbella cistula					Sc			Sc																					
" lanceolata									Sc																				
Epithemia turgida					Sc				Sc																				

Conjugateæ.	May 1, 1893.	May 8.	May 15.	May 22.	May 25.	June 1.	June 5.	June 12.	June 15.	June 19.	June 25.	July 2.	July 9.	July 16.	July 24.	July 31.	Aug. 6.	Aug. 13.	Aug. 21.	Aug. 28.	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.	Oct. 28.
Spirogyra tenuissima																													
" varians																													
" indet															Sc	Sc				Sc									
Desmideæ.																													
Hyalotheca disilliens	Sc	Sc	Sc			Sc	Sc	Sc		Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc		Sc	Sc								
Desmidium Aptogonium		Sc		Sc		Sc		Sc		Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc		Sc	Sc	Sc							
" Baileyi						Sc				Sc				Sc	Sc	Sc	Sc	Sc		Sc									
Sphærozosma filiformæ	Sc		Sc	Sc		Sc																							
" excavatum																													
Spirotænia condensata			Sc																										
Closterium Ensis																				Sc									
" gracile																						Sc							
" lanceolatum																													
" striolatum																													
" Dianeæ		Sc			Sc				Sc													Sc							
" rostratrum	Sc		Sc	Sc		Sc	Sc				Sc											Sc							Sc
" sp. indet																							Sc					Sc	
Docidium Trabecula		Sc	Sc					Sc		Sc	Sc	Sc			Sc	Sc		Sc		Sc			Sc						
Cosmarium ovale																					Sc								
" moniliforme	Sc		Sc																			Sc							Sc
" Beckii			Sc																										
" Broomeii																		Sc			Sc		Sc						
Xanthidium cristatum						Sc																							
" antelopæum																				Sc	Sc								
Arthrodesmus Incus	Sc	Sc	Sc	Sc		Sc	Sc	Sc		Sc																			
" octocornis				Sc																									
Micrasterias Torreyi																													
" radiosa																													
" denticulata																										Sc			
" fimbriata			Sc							Sc	Sc				Sc	Sc	Sc	Sc		Sc	Sc		Sc						
" Americana										Sc																			
" pinnatifida																				Sc									
Staurastrum dejectum				Sc																									
" brevispina	Sc	Sc	Sc				Sc	Sc		Sc	Sc	Sc		Sc		Sc				Sc									
" aristiferum																													Sc
" cuspidatum									Sc							Sc						Sc			Sc	Sc			
" brachiatum																		Sc	Sc			Sc							
" crenulatum	Sc		Sc	Sc		Sc	Sc	Sc		Sc	Sc	Sc		Sc	Sc				Sc	Sc	Sc		Sc			Sc			Sc
" punctulatum																													
" alternans																													
" gracile																													
" leptocladum								Sc										Sc			Sc				Sc	Sc		Sc	
" Sebaldum												Sc																	Sc
" hirsutum		Sc	Sc																										
" polymorphum		Sc	Sc	Sc		Sc			Sc																				
" arctiscon																													

Protococcoideæ.	May 1, 1893.	May 8.	May 15.	May 22.	May 25.	June 1.	June 5.	June 12.	June 15.	June 19.	June 25.	July 2.	July 9.	July 16.	July 24.	July 31.	Aug 6.	Aug. 13.	Aug. 21.	Aug. 28.	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.	Oct. 28.
Rhaphidim polymorphum........	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc		Sc	Sc		Sc	Sc	Sc	Sc	Sc		Sc	Sc		Sc	Sc
Dictyosphaerium Ehrenbergii ...	Sc		Sc	Sc	Sc	Sc	Sc	Sc		Sc	F	Sc		Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc		Sc	Sc
Polyedrium longispina....		Sc				Sc																							
Protococcus viridis.............																													
" vestitus?..........								Sc		Sc	Sc			Sc		Sc	Sc					Sc							
Characium Naegelii.............																													
Scenedesmus caudatus..........	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	F	Sc		Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc		Sc	Sc
" dimorphus.........	Sc			Sc			Sc	Sc		Sc				Sc	Sc		Sc	Sc	Sc		Sc	Sc	Sc		Sc	Sc		Sc	Sc
Pediastrum Boryanum........ ..	Sc		Sc	Sc	Sc	Sc	Sc	Sc	F x	F	Sc	Sc		Sc	Sc	Sc	Sc	Sc		Sc	Sc	Sc	Sc			Sc		Sc	Sc
" Ehrenberghiana....	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc			Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc				
" pertusum..........						Sc	Sc	Sc	F	F	Sc	Sc		F	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc		Sc	Sc
" forcipatum.........																		Sc											
Pandorina morum...............					Sc																								
Volvox globator...............										Sc								Sc		Sc			Sc						
Gonium pectorale...............							Sc					Sc		Sc				Sc			Sc				Sc				
Eudorina stagnale...............																													
Rhaph. convolutium.....								Sc	Sc					Sc		Sc			Sc	Sc	Sc		Sc						
Coelastrum micoporon..........								Sc	Sc	Sc	Sc	Sc		Sc	Sc	Sc	Sc			Sc	Sc	Sc							Sc
Miscellany.																													
Plant parenchyma..............								Sc	Sc																				
Spiral vessels..................							Sc				Sc																		
Ducts...........................																													
Tracheids.......................																													
Trichomes, plain................						Sc		Sc			Sc																		
Pollen. Conifer..................		Sc		Sc	Sc	Sc																							
Pollen. sp. indet................																													
Trichomes stellate..............							Sc		Sc																				
Fungi spores....................																Sc		Sc	Sc				Sc						

ANIMAL FORMS.	May 1, 1893.	May 8.	May 15.	May 22.	May 25.	June 1.	June 5.	June 12.	June 15.	June 19.	June 25.	July 2.	July 9.	July,16.	July 24.	July 31.	Aug. 6.	Aug. 13.	Aug. 21.	Aug. 28.	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.	Oct. 28.
Rhizopods.																													
Amœba proteus																													
“ radiosa			Sc																			Sc							
Arcella vulgaris	Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc			Sc				Sc
Euglypha alveolata									Sc	Sc				Sc						Sc	Sc	Sc							
Arcella mitrata																			Sc										
Difflugia pyriformis									Sc						Sc														
Difflugia sp.					Sc	Sc	Sc							Sc															
Actinophys sol.				Sc		Sc								Sc		Sc		Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc			
Vampyrella sp. ? ? ?																Sc													
Infusoria.																													
Monas sp.																	Sc												
Pleuromonas jaculans		Sc				Sc		Sc		Sc		Sc										Sc							
Paramonas globosa		Sc					Sc		Sc	Sc				Sc															
Dinobryon sertularia	Sc	Sc	Sc			Sc	Sc	F	F	Sc	Sc	Sc		Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc		Sc	Sc
Diplomastix caudata																													
Euglena viridis!					Sc																								
“ acus																													
Phacus triqueter			Sc						Sc																				
Trachelomonas cylindrica			Sc			Sc		F	Sc	Sc	Sc					Sc				Sc	Sc	Sc	Sc			Sc		Sc	
“ volvocina					Sc		Sc	Sc	F		Sc	Sc						Sc							Sc				Sc
“ hispida ?					Sc																								
“ piscatoris ?																					Sc								
Mallamonas Ploslii			Sc																										
Astasia tricophora																					Sc								
Synura Uvella																													
Peridinium tabellatum	Sc		Sc				Sc		Sc	Sc				Sc	Sc	Sc	Sc	Sc								Sc		Sc	
Uroglena volvox									Sc							Sc	Sc			Sc									
Gymnodium fuscum																													
Paramecium bursaria					Sc		Sc		Sc		Sc			Sc	Sc			Sc	Sc	Sc	Sc					Sc		Sc	
Vorticella communis	Sc		Sc			Sc																			Sc				
“ microstoma,																													
Litonotus fasciola																													
Chilodon cucullus			Sc		Sc																								
Ceratiium longicornis								Sc		Sc	Sc	Sc		Sc			Sc	Sc			Sc	Sc							

Rotifereæ.	May 1, 1893.	May 8.	May 15.	May 22.	May 25.	June 1.	June 5.	June 12.	June 15.	June 19.	June 25.	July 2.	July 9.	July 16.	July 24.	July 31.	Aug. 6.	Aug. 13.	Aug. 21.	Aug. 28.	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Sept. 30.	Oct. 7.	Oct. 14.	Oct. 21.	Oct. 28.
Monostyla lunaris		Sc				Sc								Sc						Sc									
Rotifer vulgaris																Sc													
Philodina sp.			Sc																										
Polyarthra platyptera									Sc																				
Anurea cochlearis		Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc x	Sc		Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc
Brachionus urceolaris																													
Crustaceæ.																													
Daphnia pulex								Sc	Sc	Sc	Sc	Sc		Sc		Sc	Sc		Sc										
Bosmina longirostris								Sc		Sc	Sc	Sc		Sc	Sc	Sc	Sc		Sc	Sc	Sc	Sc	Sc		Sc	Sc			
Cyclops quadricornis					Sc	Sc	Sc	Sc	Sc	Sc	Sc	Sc		Sc	Sc				Sc		Sc								
Cypris sp.						Sc		Sc	Sc																				
Campthocercus														Sc															
Fragments				Sc			Sc		Sc		Sc								Sc										
Vermes.																													
Anguillula fluviatilis	Sc				Sc	Sc	Sc		Sc	Sc				Sc					Sc			Sc	Sc						
Spongideæ.																													
Spicules, rough									Sc			Sc			Sc			Sc	Sc	Sc	Sc								
" smooth					Sc	Sc		Sc				Sc			Sc				Sc										
Miscellany.																													
Epithelium									Sc																				
Butterfly scales									Sc																				

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STRANGULATED UMBILICAL HERNIA.

BY JAMES P. WARBASSE, M.D.,

Assistant Surgeon to the Methodist Episcopal Hospital.

Read before the Brooklyn Pathological Society, March 8, 1894.

This disease is of especial importance because of its high degree of mortality—a degree of mortality out of proportion to that in other herniæ—and, inasmuch as the increased fatality is observed quite entirely in cases in which some part of the alimentary canal is included in the hernial tumor, I shall confine myself in this paper chiefly to the consideration of strangulated umbilical enterocele.

In order to appreciate fully the peculiarities of this variety of hernia, we must give some attention to the anatomy of the umbilical region. At the umbilicus there is naturally no peritoneal opening. The umbilical or hypogastric arteries, arising from the internal iliac vessels, pass upwards between the peritoneum and the abdominal muscles. The round ligament of the liver transmits the umbilical vein to the umbilicus. The opening in the middle of the linea alba through which these vessels pass in the fœtus, in the adult becomes contracted to a ring scarcely admitting a quill or a probe. This minute opening contains a small amount of loose connective tissue surrounding the few fibers remaining as relics of the three umbilical vessels These fibers are directly attached to the overlying skin, but have no connection with the peritoneum behind the opening. In the adult this opening becomes contracted, until, because of the greater density of the tissue which replaces its site and the fact that it is made up of fibers running in many directions, this particular point in the adult becomes firm and strong; whereas in the infant it is very commonly the seat of hernia. The fibers of the linea alba about this opening are arranged almost entirely tranversely, being formed by the union of the aponeuroses of the two oblique and the transverse muscles, the tendinous fibers being continued in a decussating manner from one side to the other.

The umbilical hernia of infants occurs through the umbilical opening, and is anatomically and clinically different from that of adults. It is almost invariably self-limiting, and never runs on into the typical hernia of the adult. When an hernia occurs in an adult it very rarely takes place through the site of the umbilical opening, but is extruded between the fibers of the linea alba in the immediate neighborhood of the old omphalic ring. Petit[1], in a very large number of adult cases, has observed but two involving the umbilical ring. I know of no satisfactory explanation for this having been given, and, therefore, venture to suggest that it may be partially accounted for by the thinning out or separation of the tendinous fibers above and below the omphalic scar, caused by the contraction of a ring of considerable size down to a mere point. If to this be added the clinical fact that these herniæ are usually observed in persons past middle age with feeble, relaxed abdominal walls, and especially in fat, flabby, elderly women who have born children, the etiology seems fairly clear.

Attention has been called to certain small openings along the linea alba, through which pass branches of the intercostal vessels and nerves.[2] Usually these openings are filled up with connective tissue or fat. In fleshy persons they become considerably enlarged, and a loss of flesh and strength in such persons leaves the openings patulous and flabby. A reflection of peritoneum by internal pressure may be pressed into such an opening. These sacs are sometimes discovered in the dissecting room before any visceral body has become engaged in them. Sometimes they are the foci of herniæ.

The variety of umbilical hernia which becomes strangulated is that which is acquired, and usually late in life. The size is most commonly not greater than a man's fist. Rarely is intestine without omentum found in these ruptures. Much more frequently is omentum alone herniated. The explanation of this is very simple when we consider how the omentum hangs as a curtain between the gut and the umbilicus. The portion of gut herniated is usually transverse colon or small intestine, though the stomach has been found as well as other parts of the large intestine in the sac.

According to Bryant's table, out of one hundred strangulated herniæ, six were of the umbilical variety.[3] Out of 102 herniæ which have been subjected to operation for radical cure in the Methodist Hospital in Brooklyn, eight were of the umbilical variety; and of these eight, six were strangulated. Forty-four of the 102 were strangulated herniæ, which shows six umbilical among 44 strangulated herniæ, a percentage considerably larger than that of Mr. Bryant's.

It was formerly claimed by Petit and De la Faye that no peritoneal sac was extruded before the hernia, but that the hernia escaped through a rent in the peritoneum. This may be true in some cases, but since Cooper demonstrated such a covering it has been the general experience of surgeons to find peritoneum as a part of the sac.

A peculiar feature of these herniæ is the extreme degree of thinness to which the sac may be reduced; and it is usually the case that immediately over the apex of the tumor, the thin peritoneal sac lies directly beneath the greatly attenuated skin. Boyer speaks of a case in which the sac was so thin that the intestinal folds were perceptible through the sac whenever the intestine became distended with gas. Rupture of the sac and escape of the gut has occurred as a result of some exertion in such cases.

The symptoms are of the same sort as those of strangulation in other herniæ, with the exception that they are apt to be more acute. The ring causes a tighter and more inelastic constriction; and every one who has cut through such a ring can testify to its almost cartilaginous firmness.

The point of greatest interest in these cases is the high degree of mortality. This seems entirely out of proportion to that of other herniæ. Pott[5], of London, wrote, "Though I have in the inguinal and scrotal hernias advised the early use of the knife, I cannot press it so much in this; the success of it is very rare, and I should make it the last remedy." Scarpa concluded that the great danger in strangulated umbilical hernia was the injury to the strangulated gut, and that the operation was performed too late. Agnew says, "It will be fortunate if the reduction can be effected without dividing the sac, for when the latter becomes necessary the doom of the patient is probably sealed, death following in almost all such cases."

Hugier obtained such discouraging results that he was willing to leave the thing to nature in the hope that a spontaneous fæcal fistula would form. Uhde observed a mortality of 46.7 per cent. among 122 cases of strangulated umbilical hernia. Kœnig states in the last edition of his great work that, though the figures of Uhde probably show the prognosis more favorable than it really is, still there is every reason to operate on these cases.[3]

Although these may be called modern views, still the most recent views of the subject accord with those of Lucas Championnière[6], who advises that every case of umbilical hernia in the adult, strangulated or not, when no other conditions contra-indicate, is a proper case for operation; because in the first case the life may be saved by timely operation, and in the second case the danger of strangulation may be averted.

I wish to report here a case upon which I operated in July last —a case which was admitted to the service of Dr. Pilcher at the Methodist Episcopal Hospital, in Brooklyn, suffering from an acute strangulation. The patient, a laboring woman, forty years of age, had carried a small umbilical hernia for a number of years, which on several occasions had become partially incarcerated. She had one such attack about a year before the operation. Twenty hours before, she had been suddenly seized with agonizing pains about the umbilical region and vomiting. The bowels had not moved for four days. The tumor, about the size of an hen's egg, was situated to the right and above the umbilicus. It was exquisitely tender. She was vomiting frequently, and presented all of the signs of a very acute intestinal strangulation. I exposed the sac, which was made up of peritoneum, and isolated it down to its neck. The overlying skin was stretched out to a degree of extreme thinness, so that for coverings the gut had but the peritoneum and the greatly attenuated skin. On opening the sac, it was found to contain about six inches of very dark small intestine. The contents of the sac were divided into two compartments by a tight band passing across just outside of the ring. The ring was so firm and tight it was necessary, in order to divide it, to continue my incision downwards and open the belly in the median line below the hernia, and thus cut the ring from without inwards towards the gut. The ring was exceedingly dense and resisting, compared with that usually observed in inguinal and femoral herniæ. The strangulated intestine cleared up, the sac was cut away, and the opening closed as an ordinary abdominal wound, the peritoneum being united with catgut and the deep and superficial fascia with the crossed silk worm gut suture. All symptoms of strangulation at once disappeared, and the patient made an uninterrupted and rapid recovery.

I am of the opinion that the great tightness of the constriction in these herniæ is the cause of the high degree of mortality. When the strangulation is so tight and inelastic as is the case with umbilical ruptures the vitality of the gut suffers much greater damage in a few hours of strangulation than it does from a much longer period when the constriction is more yielding and elastic. If to this be superadded the repeated traumatism of taxis, the condition is greatly aggravated. Various explanations are given for this high rate of mortality. It is claimed that the nearness to the great sympathetic plexuses has something to do with it. This idea can scarcely be regarded as tenable, for physiologically these plexuses are in no closer connection with an umbilical than with an inguinal hernia. It seems to me that the explanation lies in the greater damage arising from the strangulation and from the traumatism inflicted by taxis. A strangulated umbilical hernia, in contra-distinction from other herniæ, lies thinly covered outside of the belly upon the hard linea alba and constricted about the neck by a ring unusually tight and non-resisting. To manipulate such a tumor inflicts a much greater degree of traumatism than is the case in the other varieties of rupture. Associated with this is the clinical fact that these herniæ are usually observed in debilitated persons.

The case which is reported above was spared the danger of repeated efforts at reduction by taxis. She had seen no physician before coming to the hospital, and there but one short attempt was made—this failing, the operation was at once proceeded with.

Five other cases of strangulated umbilical hernia have been operated upon at the Methodist Hospital, four of which were enteroceles. The other was the case of a man, sixty-one years of age, in which the omentum alone was involved. This was excised, and the patient made a satisfactory recovery. All of the four enteroceles were sent in for operation as a last resort, and to show the extreme condition of these unfortunates upon reaching the surgeon's hands, the cases may be briefly mentioned.

Case I. was a woman, fifty years of age, weighing 320 pounds, who was admitted in a state of profound depression on the day following the occurrence of the strangulation. The hernial protrusion had been in existence for twenty years. Once during that time it had become incompletely strangulated and had been reduced by taxis. An incision was made over the most prominent part of the tumor. The intestines were found almost black from strangulation. The constriction was divided outside of the dense fibrous ring, the gut improved in color, and was returned to the abdominal cavity, considerable time being consumed in separating old and dense adhesions. The patient never rallied from the operation.

Case II. was that of a fleshy woman fifty-two years of age, who had carried for four months an hernia situated to the right of the umbilicus. Soon after its appearance it had become incompletely obstructed, but was reduced by manipulation. The tumor soon reappeared, and as it increased in size, an inguinal hernia which was also present gradually disappeared. Four days before her admission to the hospital, the symptoms of strangulation began. They steadily increased in severity, the vomiting became fæcal, and the patient was admitted for operation in an almost moribund state. The abdomen was opened below the tumor and reduction attempted from within. This could not be accomplished, so the ring was divided from without. The sac was found to contain nearly the entire length of the small intestine together with the transverse colon. The patient died shortly after the operation.

Case III. was a woman forty-three years of age, who had suffered from umbilical hernia for twenty-three years. On four different occasions threatening signs of strangulation had developed; still the tumor had always been reducible. Twenty-four hours before operation the hernia had become acutely strangulated. During that time four attempts had been made to effect a reduction under chloroform anæsthetization. She was finally sent to the hospital. The sac was opened, and a knuckle of intensely congested gut was found. The ring was so tight that it could not be cut from within outwards, but it was found necessary to cut from without through the ring towards the gut. The intestine improved greatly and was returned. The patient died on the second day after the operation.

Case IV. is of especial interest because of the extreme acuteness of the attack. The patient, a woman fifty-four years of age, had carried an umbilical hernia for many years. The strangulation developed very suddenly, and within a few hours the patient was profoundly prostrated. Ten hours after the onset of the attack, the sac was cut down upon and the strangulation relieved. It was found that a septum divided the sac into two compartments. The gut in the lower compartment was strangulated, that in the upper was not, but was bound down by firm adhesions. The intestine was relieved, but the patient continued to suffer from symptoms of intestinal obstruction, and died on the second day.

Accepting the view which I have presented above as an explanation for this high degree of mortality in umbilical strangulation of the intestine, the question arises as to how it can be lessened. The one case out of five which recovered, did not recover because of any difference in operative technique; she recovered because the operation was done early and the gut had not been damaged by the traumatism of repeated taxis. As was so in all of these cases, the tightness and extreme hardness of the ring made such a thing as reduction by taxis simply out of the question ; and every one of such attempts took from the patient a chance of recovery. There was a time in the history of each of those cases when operation could have saved the patient's life.

Taxis in such cases has much less to offer than in the other varieties of hernia. It is very possible for the gut to be so damaged that even after reduction is effected, the patient may die of intestinal obstruction because of the fact that a portion of the intestine remains paralyzed. When gentle and persistent taxis has been employed without avail, operative interference becomes imperative. There is no more hazard in opening the abdomen in the umbilical region than anywhere else, but there is more hazard in temporizing with an umbilical rupture than with other varieties.

Championnière, thirteen years ago, believed so thoroughly in the urgency of the necessity for the radical cure of umbilical hernia that he did not hesitate to advise women, whether the hernia were large or small, to subject themselves to operation for its radical cure. This feeling will gain ground among surgeons until the necessity for operating for strangulation will become less frequent; just as it is with spontaneous torsion of the pedicle of ovarian cysts because a smaller proportion of women will carry their umbilical ruptures until the accident occurs. So the time is coming when patients will be advised to be freed from the danger which they are constantly carrying with them in the shape of an hazardous and life-long infirmity; for, unlike the rupture of infancy, that in the adult does not tend to spontaneous relief. It must always be born in mind that another danger of allowing these herniæ to go on is that old umbilical herniæ become greatly involved in adhesions, which in the operation upon non-strangulated cases are the cause of greatly prolonging the operation and which in the strangulated case becomes an item of inestimable gravity.

The operation itself is easier than that for femoral or inguinal hernia. It is the general custom to close the opening just as any abdominal wound, the edges of the ring being excised or freshened. Stränger has collected the statistics of twenty-seven non-strangulated cases operated upon for radical cure since 1879, with one death. He divides the tissue about the ring in two layers, and closes the wound with silk sutures. Recurrence took place in seven of these cases.

Gersuny[9] has recently published a new method for the radical operation for umbilical rupture. He obliterates the tendinous linea alba, and puts in its place strong muscular tissue. The operation consists in first uniting the peritoneal wound. The inner borders of the recti muscles are then found and the sheaths of the muscles split on their inner borders. The posterior parts of the sheaths are then sewed together. The exposed bellies of the muscles are finally brought together by a large surface secured by passing deep sutures through the muscle and overlying structures. These sutures are placed near the edges of the wound at the skin-surface, but in the muscle they are made to pass a considerable distance from the edges, thus including a good deal of the muscular tissue and causing broad muscular surfaces to come together or even to overlap. This procedure will certainly diminish the percentage of recurrences.

The operation of omphalectomy was first described by Keen. More recently has Condamin[8] improved the operation of excision of the whole umbilical ring. Bruns[10] has described in the *Centralblatt für Chirurgie* of January of this year a method which he has had an opportunity of employing with great satisfaction, which consists in excising the umbilical ring by an elliptical incision. He carries a curved incision 16 cm. long about the right side of the umbilicus, beginning in the middle line above the tumor and ending in the middle line below it. This incision is continued entirely through the abdominal wall. The portion of the wall containing the hernia is then turned over like a valve, the ring cut and the gut and omentum liberated from below. A similar incision is then carried about the other side and the whole ellipse removed. the edges of the abdominal wound are then brought together, the result being an apposition of perfectly normal tissue, through which there is even less danger of hernia than through the scar of an ordinary median section involving the linea alba.

With these improvements the radical cure of umbilical hernia bids fair to become more successful than the radical cure of the inguinal and femoral varieties; and, inasmuch as the strangulation of the first is so much more dangerous than the latter, how much more imperative becomes the necessity for its radical cure!

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REPORT OF ONE HUNDRED AND THIRTY OPERATIONS, PERFORMED AT THE LONG ISLAND COLLEGE HOSPITAL DURING THE REGULAR SESSION OF 1893–94.

BY J. S. WIGHT, M.D.,
Professor of Operative and Clinical Surgery at the Long Island College Hospital, Brooklyn, N. Y.

Case I.—A policeman, thirty-two years old, was thrown from a police-wagon, and came down with his left side upon the pavement. A considerable swelling formed over the left trochanter. Under ordinary treatment the swelling persisted. September 14, 1893, about two months after the accident, I operated upon him. An incision was made into the bursa under the tendon of the gluteus maximus. About one half-pint of sero-sanguineous fluid was let out. The bursal cavity was packed with aseptic gauze. A rapid recovery followed.

Case II.—S. S., a four year old boy, had morbus coxæ of left hip. It had been first noticed by his mother about six months before admission to the hospital, August 10, 1893. There was an upward and backward displacement of the femur, accompanied by such immobility of the limb as to prevent walking. On all fours, he could make rapid locomotion. I operated September 20, 1893. An incision was made down upon the upper end of the femur. About two inches were cut off with Dr. Wyeth's exsection saw. The femoral head and neck were absent, having been absorbed. The socket was filled with fibrous tissue. The limb came down into place. A fenestrated side splint, with a foot-piece, was applied, after the wound had been packed with aseptic gauze.

Case III.—Bessie W., eight years of age, had a tumor which had been growing upon the palmar aspect of the first bone of the left thumb for the previous six years. It caused her some pain and considerable annoyance. On the 20th of September, 1893, an incision in the long axis of the muscular fibres was made down to the growth. It was carefully enucleated and excised, without special damage to the overlying muscles. After disinfection, the wound was packed with aseptic gauze. In a few days the wound granulated, and in a few more the repair was complete.

Case IV.—Alma H., five years of age, had an injury to the popliteal space two years ago. Abscesses formed, and left fistulæ. These were laid open in the early part of September, 1893. The opening under the external ham-string did not take on repair. On the 20th of September this tract was very freely opened, and the old scar was scraped out as thoroughly as possible. A drainage tube was inserted and antiseptic precautions taken.

Case V.—Mr. H., twenty-nine years of age, had pneumonia eight years ago, and afterwards had a cough, which was benefited by a sojourn in California. He noticed, about this time, a tumor coming in front of the upper region of the left thigh. It gave him but little pain, but it increased slowly in size. In September, 1893, he came to the hospital for treatment. The swelling was about eight inches in a vertical direction, and about six inches from side to side. It was fluctuating. At some points along its base a wall of limiting fibrin could be detected. It was probably a chronic tubercular abscess. On September 20th I made two openings into the cavity with a bistoury, and put in a drainage tube, evacuating the fluid, which was nearly opaque; it was gelatinous and contained albumen. In a few days pus was discharged from the drainage tube. Subsequently the cavity was laid open completely, when repair speedily followed.

Case VI.—F. C., a seven-months old girl, had a nævus of the lower lip, and it had become quite large. It had been injected, at my suggestion, about two months ago, by Dr. Burge, with an equal part solution of glycerine and carbolic acid. A cure had been nearly effected. I injected a similar solution, three or four drops in two places, where there was some vascularity left. It is highly important, in these cases, to "cut off" the circulation of the vascular growth from that of the general circulation. The result in this case was a complete cure without deformity or scar.

Case VII.—Mr. S., a stone-cutter, about twenty-nine years of age, had an abscess on the outer aspect of right elbow three years ago. It broke and has discharged since. There was a fistula. It was laid open and curetted on 22d of September, 1893. It did not involve the elbow-joint. Repair went on slowly, as it generally does in fibrous tissue.

Case VIII.—G. H., a sailor, twenty-six years of age, had his right index finger caught in a windlass. He had a compound fracture of the first finger-bone near the middle. The accident happened about three weeks ago. September 22, 1893, I opened the wound, and found internal lateral displacement of the distal end of the proximal fragment, accompanied by some superficial necrosis. The union of the fragments was quite firm, and the motion of the adjacent joints was considerable. I cut away the dead bone with the rongeur. The wound healed in a short time and the patient had a useful finger, the joints being limited in their motion.

CASE IX.—A. J. L., a seaman, twenty-two years of age, had a reducible scrotal hernia of the left side. It was large, and had existed for a long time. The patient was not sure how long it had existed. He could not say when he did not have it. The canal was very large, and resembled that of an old "straight hernia." He had never had a truss that would keep the hernia reduced. He requested me to operate for radical cure—as that only promised relief. He consented to the removal of the testicle, if it was necessary. On September 22, 1893, I operated in the usual way, finding it impossible to save a useless testicle and close the very large opening. It was then possible to bring the sides of the opening together by means of strong silk sutures. The result was a radical cure.

CASE X.—E. K., a seaman, thirty-three years of age, had acute inflammation of the glands in the right inguinal region. A few days after admission to the hospital, the adenitis became suppurative. Under the influence of ether, a crucial incision was made evacuating a small quantity of pus. Then the curette was carefully used. Disinfection of the wound was followed by aseptic dressing. The case rapidly improved.

CASE XI.—S. F., a domestic, fifty-four years of age, was seen by me about one year ago for dropsy. After removing about four gallons of a chocolate-colored fluid, I confirmed the diagnosis of cancer of the omentum involving the abdominal organs. During the year I tapped her some fifteen times. In the month of July, 1893, she was admitted to the College Hospital, where she was tapped several times. The operation was done in the median line at different points below the umbilicus. On September 27th I tapped her again in the presence of the medical class, as she was sitting in an easy chair. Internal use of arsenic and other remedies may have retarded the development of the neoplasm.

CASE XII.—James W., thirty-nine years of age, three years ago had a small swelling come under the left side of his tongue. About three months ago an opening formed on the outside under the jaw in the region of the submaxillary gland. Considerable pus came out. A fistula was left, discharging a fluid like that from the submaxillary gland. There was considerable induration around the track of the fistula. September 27, 1893, I excised the submaxillary gland and the peri-jacent indurated tissue. During the operation there was considerable hæmorrhage, coming from the enlarged blood vessels. A number of suture ligatures were required. The hypoglossal nerve was not injured. By grasping the periglandular tissue with catch forceps, and cutting between the tumor and the jaws of the forceps, the enucleation was greatly facilitated. The wound was made aseptic. It was dusted with iodoform and packed with sterilized gauze. A compress was applied by means of a bandage. There was some oozing of blood after the operation. A microscopical examination showed the proliferation to be that of a small, round-celled sarcoma. The patient was given the bromide of arsenic and carbonate of lime. The wound of operation healed about the middle of October, and the patient was discharged from the hospital much improved.

Case XIII.—Peter D., seven years of age, had suffered from acute suppurative necrosis of the left lower jaw during the previous winter. A kind of new jaw had formed, and the sequestrum had become partly separated. There were two openings in the soft parts; one just above the angle of the jaw; the other just back or outside of the symphysis. An incision was made between them down to the bone. By detaching the edges of the new bone, it became possible to extract the sequestrum with a strong pair of forceps.

Case XIV.—James N., a laborer, twenty-seven years of age, about three weeks ago noticed a painful swelling in his right side; it was located between the crest of the ilium and the lower rib, nearly over the ascending colon. September 27th there was fluctuation, and a wall of "limiting fibrin" around a considerable space. The exploring needle disclosed pus, confirming the diagnosis. An incision was made with a scalpel, evacuating about a pint of pus, having a very unpleasant odor, such as comes from abscesses near the alimentary canal. An exploring probe defined a well-formed abscess-wall. The cavity was washed out with a warm solution of mercuric chloride. This was a case of appendicitis, forming pus, which found its way up the ascending colon, and the point toward the space between the last rib and the crest of the ilium.

Case XV.—J. D., a housewife, twenty-one years of age, had an attack of pleuritis on the left side in February, 1893. March 29th 500 grams of serous fluid were aspirated. April 8th four litres of a turbid fluid were drawn off. April 29th an exploring needle detected sero-pus. April 30th a portion of one rib was exsected for empyæma. August 12, same year, 1893, Dr. Burge enlarged the opening and put in a drainage tube. The last week in September Dr. Van Cott found the bacilli of tuberculosis. A cavity of considerable size remained. September 28th Dr. Wight made an opening at a distance of two ribs above, and passed a drainage tube through both the new and the old openings, and irrigated the cavity with a solution of mercuric chloride. The two ribs above were so near each other that they compressed the drainage tube to some extent. Subsequently Dr. Wight removed about two inches of three ribs, and then it was possible to obtain better drainage. The cavity soon began to diminish in size. The condition of the patient greatly improved, but she was removed from the hospital, interrupting the treatment.

Case XVI.—A. B., a housewife, twenty-nine years of age, after her husband struck her in the face with his fist, was admitted to the hospital September 22, 1893, having a fracture of the nasal bones, accompanied by depression on the right side. An attempt to make reduction did not succeed very well. After the swelling subsided, on the 2d of October, an anæsthetic was given, and a more persistent attempt, by means of elevators, resulted in restoring the nose to nearly its normal appearance.

Case XVII.—A three year old girl had tuberculosis of the carpal and metacarpal bones of the hand, and the back of the metacarpus had been opened some time previous. An abscess formed on the palm between the thumb and index finger. On the 3d of October it was freely incised and the cavity was curetted, and then dressed with antiseptic gauze.

Case XVIII.—Mrs. ——, fifty-five years of age, had a tumor occupying the left cheek. It was somewhat movable and semi-fluctuating. It appeared to be of a cystic nature. The growth began about twelve years previous and grew slowly for ten years. During the last two years the development had been more rapid.

Dr. Byrne saw the case last summer, and gave bromide of arsenic and iodide of potassium; the tumor decreased in size apparently under the action of the drugs. October 4, 1893, I operated by incision and enucleation. I employed deep sutures, and complete primary union resulted.

Case XIX.—A six months old boy had a large nævus at the root of the nose, extending near the internal angle of the right eye. The growth was very vascular and showed signs of breaking down. The patient was quickly etherized with my inhaler. A strong, curved needle was passed vertically under the base of the nævus close to the bone. Under the centre of the nævus transversely, a curved Hagadorn needle carrying a steel wire was passed, and the wire was cut off near the eye of the needle. Each half of the wire ligature was tied under its end of the first needle, completely strangulating the nævus. Two vascular points were left subsequently; they were punctured with electric needle.

Case XX.—P. O., a school-boy, nine years of age, came to the clinic October 4th, with the left cervical glands enlarged. They had been growing about six months. Those in the submaxillary triangle were quite large and protuberant, concealing, as it were, those in the region behind the sterno-cleido-mastoid. The boy was under average size. An incision about three and one-half inches in length was made over the main part of the growth. A considerable mass of glands was enucleated, with the knife and scissors, using the hæmostatic forceps freely, not only for bleeding vessels, but seizing the bands of attacked tissue with them in order to cut them from the morbid growth. A longer incision was made between the sterno-mastoid and the trapezius. A large number of enlarged glands were removed, exposing the underlying tissues from the styloid process to the apex of the lung. Finally a large gland was removed from behind the lower end of the sterno-mastoid. In fact, this muscle was separated from the underlying structures, and was only attached by means of its origin and insertion. The wound was made aseptic by irrigation, and carefully dressed.

Case XXI.—A seven year old school-boy was brought to the hospital October 5, 1893, having phymosis, accompanied by inflammation of the prepuce. Pus had not yet formed. An oval amputation of the prepuce was performed; a dorsal incision was made through the entire prepuce, and then the end and corners were cut off. A continuous cat-gut suture was employed. The hæmorrhage ceased. A simple aseptic dressing was applied.

Case XXII.—H. H., a sailor, twenty-one years of age, had a tooth extracted, and a few days after came to the College Hospital, with a very large abscess on the right side of his neck. The fluctuation was marked, the cutaneous wall was thin, and the "limiting fibrin" could be felt at various points along the base of the abscess. Two large vertical incisions were made, discharging the pus which contained blood and several sloughs of considerable size. After irrigation a drainage tube was inserted.

Case XXIII.—M. G., a housewife, thirty-three years of age, had necrosis of the joint between the second and third bones of the left index finger. The inflammation had followed a scratch, in which infection occurred. A circular amputation was performed in the continuity of the second finger-bone, and flaps were made by lateral incisions. The bone was severed with the bone-nipper. The wound was dressed open, in order that free discharge might take place.

Case XXIV.—O. H., a sailor, fifteen years of age, was admitted to the hospital for rheumatism, and after a few days was transferred to the surgical ward. He had a large fluctuating swelling in the front of the upper part of the right leg. A free incision let out nearly half a pint of pus containing a large proportion of blood. The outset of the abscess was an hæmatocele from a bruise; or there had been hæmorrhage from the wall of the abscess. The cavity was irrigated with a mercuric chloride solution. October 25, 1893, it became necessary to lay open two large sinuses. Then the patient improved rapidly.

Case XXV.—J. L., a school-boy, fifteen years of age, had been in the hospital for some weeks under the care of Dr. Burge, on account of complicated injury of the left knee, and had been improving. A large abscess formed in the upper part of the inner side of the left leg. A free incision evacuated nearly six ounces of pus, that contained several small sloughs, and had an unpleasant odor. The relief was marked, and the improvement was resumed.

Cass XXVI.—Mrs. F., married, and in good general health, had noticed a tumor in her left breast for some six months. The growth had no doubt been developing for a long time. It was movable, and located for the most part on the axillary side of the nipple. It was not painful. Slight retraction of the nipple had taken place. October 10, 1893, I operated before a section of the medical class in the following manner: Two curved incisions, meeting in front and towards the axilla, were made. The breast and tumor were rapidly excised, the hæmorrhage being controlled by pressure and catch forceps. All suspected layers and pieces of tissue were cut out, even to the front part of the sheath of the great pectoral muscle. A small mass of infected tissue was removed from the axilla. Two rows of sutures were inserted; a deep row to bring the entire cut surface together; these sutures also acted as ligatures; a superficial row to approximate the cutaneous edges. No drainage tube was used. I have so often given a description of the putting in of deep sutures for amputation of the breast, that I refrain from repetition.

Case XXVII.—An Italian girl, nine years of age, had tubercular disease of the right knee. Dr. Rand sent her to my clinic for operation. She had the characteristic triple displacement of the leg. The changes had not gone on to suppuration and necrosis. An anterior flap was made, and then what there was left of the inter-articular tissues was severed. About two inches of the lower end of the femur was removed with the exsection saw, so as to leave a bony surface convex from before backward. A slice of the upper end of the tibia was removed, so as to leave the bony surface concave. The convexity of the femur fitted the concavity of the tibia. The two bones were fastened together by a nail driven in obliquely from below, backward and upward, and so were kept from lateral displacement. A posterior splint kept the bones quiet, and so that they met at an angle of moderate flexion. The operation occupied twenty minutes. No ligatures were applied. A moderate oozing of blood from the drainage tube was arrested by means of pressure of a wide bandage carried around the limb over the splint.

Case XXVIII.—L. W., a housewife, thirty-six years of age, had her left thumb twisted by a woman about three months previous to her admission to the hospital in August, 1893. The second bone of the thumb had been dislocated outward and forward, and had overlapped the first bone one-third of its length. An attempt to reduce the bone had not succeeded. On the 11th of October an incision was made down to the overriding ends of the bones, and the distal end of the first bone was cut off with bone-nippers and chisel. The new plates and pieces of bone that had formed in the peri-jacent connective tissue were removed as completely as possible. The second bone was reduced, and an antiseptic dressing applied.

Case XXIX.—J. D., a laborer, forty-three years of age, was admitted to the hospital August 24, 1893, having a popliteal abscess. It had dissected up the thigh as far as the glutei muscles. It was opened freely and drained. The fistulous tract dissected its way upward under these muscles. On the 11th of October I passed a long grooved director upward into the sinus, and cut down upon the end of it just below the crest of the ilium. The openings below were enlarged, and two drainage tubes were put in. A large quantity of pus was let out, and the cavities were irrigated. The patient was to have carbonate of lime, ten grains three times a day, and the irrigation was to be continued twice daily with a ten per cent. solution of sulphurous acid.

Case XXX.—F. D., an iron-moulder, fifty-seven years of age, was admitted to the hospital October 11, 1893, with necrosis of the second bone of the middle finger of the left hand. The finger had been crushed with a sledge-hammer five weeks before. An attempt to save the finger had failed. The joints of the finger were hopelessly anchylosed, and the tendons could not recover their functions. The finger was disarticulated by the oval method. The wound was dressed in an open manner.

Case XXXI.—A. C. M., a clerk, thirty-nine years of age, had a post-rectal abscess, which matured in about ten days and opened itself, leaving a fistula that communicated with the rectum about two inches within. A grooved director was passed through the fistula, and the bridge of tissue cut with a pair of scissors. The wall of "limiting fibrin" was scarified so as to obtain new granulation tissue.

Case XXXII.—P. V., a laborer, thirty-five years of age, fell and pushed his right hand through a pane of glass, receiving a lacerated wound across the front of the right forearm, about two inches above the wrist-joint. The flexor tendon of the little finger was torn through in the lower part of the muscle. The arteries and nerves were not lacerated. The wound was closed with sutures, one of which fastened together the severed parts of the flexor of the little finger. The hand was flexed and an anterior angular splint applied from the elbow to the tips of the fingers.

(To be continued.)

CHOLERA, ITS ETIOLOGY AND TREATMENT; WITH ESPECIAL REFERENCE TO THE LIGHT THROWN ON THIS SUBJECT BY THE RECENT EPIDEMICS.

BY GEORGE T. KEMP, M.D., PH.D.

Concluded from page 541.

§ VII.

MECHANICAL AND SURGICAL METHODS OF TREATMENT.

Hot Baths.

The evidence for and against the efficacy of hot baths in cholera is so conflicting that it is difficult to say on which side the greater weight of opinion lies. Heyse (BKW, 1893, p. 20) has used hot baths very generally and speaks highly of them, saying that they make the patients more comfortable and do them good. He recommends a temperature of 35° C. (95° F.). They are also recommended by Tipiakoff (DMW, 1892, p. 884.). Rumpf has much to say in their praise, and after a very large experience in Hamburg he emphasized their efficacy at the Wiesbaden Congress (DMW, 1892, p. 878; 1893, p. 381. BKW, 1893, p. 412.) He advocates their use especially in collapse. According to him the bath should be given for about 15 minutes, and its beneficial effect is shown by deepening of the respiration and improvement in the pulse. In his discussion of the use of hot baths Wendt (p. 379) quotes Semmola that hot baths should be given every two or three hours during the stage of premonitory diarrhœa and to prevent collapse Semmola says "During collapse it has no more effect to bathe the patient than to bathe a corpse." Bethe (DMW, 1892, p. 1202) recommends hot baths in all stages except collapse, and reports one death during the bath with all symptoms of heart failure. Cantani (BKW, 1892, p. 916) has also seen bad effects follow hot baths, especially on the heart. Ratjen, on the other hand never hesitates for fear of a weak heart, having always seen the heart's action improved, if anything, by the bath.

INJECTIONS PER ANUM.

The treatment of cholera, by injections of tannic acid *per anum*, we owe to Cantani. He was present at an operation where oil was injected for intestinal obstruction, and he saw some of the oil vomited. The idea occurred to him that by applying this method to cholera, and using the proper remedies, he could disinfect the whole intestinal tract. He calls attention to the fact that in cholera the disease is caused by an organism which swarms in the intestine producing a poison which is absorbed by the blood, causing a loss of water from the blood and producing fatal effects on the system by its direct toxic action. He argued that the most pressing need in cholera when collapse is threatened is to supply heat fluid and stimulation to the body. By injecting large amounts of hot water into the intestine, heat can be more directly supplied to the body than in any other way, and the water is supplied from the injection thus saving the drain on the blood. He found by experiment that tannic acid not only kills the spirilla with which it comes in contact, but renders inert the poison which the spirilla produce. He therefore concluded that the ideal treatment was by large injections of hot tannin solutions which should be made to pass the ileo-caecal valve and fill the small intestine. This method presents certain serious mechanical difficulties by attempting to make the fluid pass the ileo-caecal valves, difficulties which any one who has tried to give such an injection will not be slow to recognize. The treatment has been widely used, however and has met with much favor. So much, indeed has been said about it that we shall have to be very brief with each author in considering the literature on the subject. Cantani (BKW, 1892, p. 916) uses from 5 to 20 grammes of tannic acid to one-and-a-half to two litres of water for each injection. The temperature of the water should be 100 to 104 F. He sometimes adds 20 to 30 drops of laudanum, and 30 to 50 grammes of gum acacia to each injection. Infusion of chamomile is sometimes used instead of water. He cautions against loss of time in beginning the treatment. If brandy and laudanum with rest in bed between blankets fail to control the diarrhœa promptly, he resorts immediately to the treatment by tannin clysters. Three or four of these should be given on the first day, and this will often be found to check the diarrhœa and other symptoms, but generally the treatment has to be kept up for several days. Cantani says (BKW, 1892, p. 921) that suppression of urine rarely takes place when this is tried in time.

Walter (BKW, 1892, p. 1063) extols the tannin clysters of Cantani and agrees with him as to their mode of action and their efficacy. He has used them largely in private practice. Tipiakoff (DMW, 1892, p. 884) has also much to say in their favor. He states that by the combination of enteroclysis, hot baths and calomel he succeeded in reducing the mortality in his cases from 64 per cent. to 24 per cent. Just here it is important to note that the cases toward the end of a cholera epidemic are rarely ever as severe as at the beginning, and as Tipiakoff mentions especially the virulence of the epidemic, we must not be misled into attributing *too much* to the change of treatment.

Bethe (DMW, 1892, p. 1202) says that if we begin early before collapse it is the best treatment we can employ. He emphasizes the necessity of making the injection pass the ileo-cæcal valve, he says that two litres will not penetrate the small intestine, but that four litres will. He makes this statement from post-mortem examinations on fatal cases.

Eckstein (Prag. Med. Wochensch. Vol. xviii., p. 35; SchJb, Vol. 236, p. 136.) Neumann (DMW, 1892, p. 796.) Feilchenfeld (DMW, 1892, p. 955) and Ratjen (DMW, 1893, p. 11) all recommend Cantani's method. Ratjen uses it together with the treatment by subcutaneous injection of salt solution.

Heyse (BKW, 1893, p. 20) says it is good during the stage of watery diarrhœa up to the time of collapse, but during collapse it is no good, and has done harm by wetting the bed and cooling down the patient.

Rumpf (DMW, 1892, p. 878) opposes it as routine treatment especially in cases where there is not much diarrhœa. In milder cases where diarrhœa has been pronounced he has seen it do much good. Referring to the tannin clysters he says: "These were very much used at first, but soon discarded in fresh and severe cases as useless. It is not very often that they are retained for any length of time in the intestine, and usually the amount taken in is small and that soon rejected. Only in the very few cases where we can get the fluid above the ileo-cæcal valve is it a fact (that we may speak of intestinal antisepsis). Since, therefore, the essential seat of the disease is in the ileum, according to all our findings, the unfavorable results in fresh severe cases formerly spoken of as cholera sicca are not to be wondered at. More favorable are the results in the less severe cases later in the epidemic, especially when the intestine has been cleaned out by the diarrhœa. In these cases the diarrhœa is checked apparently as the result of the tannin injections and the individual cases go directly into recovery."

Korach (DMW, 1892, p. 1053) only approves of them for the diarrhœa which sometimes follows cholera as a sequel. He does not believe they produce intestinal antisepsis. With this latter opinion Lauenstein is in accord (DMW, 1892, p. 980). Lauenstein reports a case where injections of tannin (one each day) were given for eight days, and in spite of this treatment the faeces showed an abundance of spirilla.

From a very careful reading of reports from the last epidemic it appears that Cantani's method had not been given a trial which was altogether satisfactory for his directions were not carried out. He recommends three or four clysters daily, and we read, as a rule, of one or two. We also see repeated reference to the fact that the injection is not retained, and that only small quantities can be given. Now it is quite apparent that unless a large amount of water is used and the ileo-caecal valve is passed, the injection can not work in the way by which Cantani claims its best action. Directly in support of this explanation of the secondary value ascribed to it by most of the physicians with large experience are the results of Bethe, who says (DMW, 1892, p. 1202): the sooner the treatment is begun the better is the outlook for success, and every hour of delay may be fateful. Of course the technical difficulties of giving an injection to reach the small intestine are great and the danger of moving the patient every three or four hours (as Cantani recommends) into the proper position, and back, in the face of threatened heart-failure is not to be overlooked, but until these difficulties are overcome, it does not appear that we shall have a fair criticism of Cantani's treatment. There are beds in the market which admit of being thrown into different positions, thus changing the position of the patient without disturbing him. Such a bed would give us the advantage of position for the battle and if some of our wealthy hospitals would lay in a supply, or if some philanthropic citizen would furnish them we may feel confident that even better results will be obtained in the future than in the past. With the obstacle of moving the patient removed, we could perfectly well practice the subcutaneous or intra-venous infusion immediately after a Cantani clyster, if the condition of the patient showed that this was necessary. In addition to the treatment by tannin, other remedies have been suggested, viz.: lead, nitrate of silver, chloroform, and carbon dioxide gas. The danger of all of these except the latter must be apparent when we think of trying to use an injection large enough to fill the ileum, and at the same time to contain enough of the drug to be efficacious. The inflation of the intestine by CO_2 was suggested by Rosenbach, who refers to C. Fränkel's observation that CO_2 prevents the growth of the spirilla, and also refers to the comparative ease with which the intestines may be filled with gas. So far as the author knows the suggestion is made purely on theoretical grounds and has not been tried.

SUBCUTANEOUS INJECTION.

Samuel (DMW, 1882, p. 882), with whose name the subcutaneous transfusion treatment of cholera is generally associated, gives us the advice to begin early with the transfusion and keep it up continuously. He used an irrigator with a Y tube. In each arm of the Y was a stopcock. There was a rubber tube from each arm of the Y and at the end of each tube a trocar. The trocars were inserted in different places and the stream turned on in one or the other, or in both, according to the rate of absorption. The fluid used is nearly always a warm solution of sodium chloride, ½ to ¾ per cent. Samuel chooses the infra-clavicular fossa as the seat of injection, as does Kutner also (DMW, 1892, p. 795). Guttman (BKW, 1892, pp. 912 and 935) says the subclavicular or the iliac region. Nothnagel and Kahler (DMW, 1892, p. 797) prefer the abdominal subcutaneous tissue. Cantani (BKW, 1892, p. 795) has tried the ileo-costal region of the groin, between the shoulder blades, and both glutei—he prefers the ileo-costal region, which is also the part recommended by Neumann (DMW, 1892, p. 796). Cantani strongly condemns the use of the neck for these injections, and reports a case of death from œdema glotidis (?) following one of them. Guttman praises this treatment highly. He finds the heart's action especially strengthened. Nothnagel and Kahler have seen excellent results from the treatment, but say they are often only transient. Kutner (DMW, 1892, p. 795) continues its use all through the asphyctic stage and during threatened collapse.

Bethe (DMW, 1892, p. 1202) in all severe cases used subcutaneous infusion of salt solution and hot tannin clysters. Cantani (BKW, 1891, p. 920) also gives very favorable statistics from the subcutaneous treatment. Michael (DMW, 1892, p. 1028) is an ardent advocate of the subcutaneous method, especially in private practice. Tipiakoff (DMW, 1892, p. 844) expresses himself as not satisfied with the method and complains of its slow absorption. Rumpf (DMW, 1892, p. 907; BKW, 1893, p. 412) and Schede (DMW, 1892, p. 907) compare it very unfavorably with the intra-venous method of injecting, Rumpf saying that the intra-venous method puts it "quite in the shade," and Schede saying that he has had to resort later to intra-venous or intra-arterial, after relying first on the subcutaneous. Lauenstein (DMW, 1892, p. 907) says that the results of the subcutaneous method are not so striking as those of the intra-venous, but they are reasonably sure. He approves of the subcutaneous method in the hospital and prefers it in private practice. He says he would endorse it more heartily than Rumpf and Schede. Lauenstein's observations are particularly valuable, for he divided his patients in groups of twenty, and observed the effects of different treatment on parallel cases. Kümmel (DMW, 1892, p. 933) is of the same opinion as Lauenstein.

Heyse (BKW, 1893, p, 20) finds the subcutaneous method inferior to the intra-venous in the algid stage, but prefers it in the third stage (choleia typhoid). Ratjen (DMW, 1893, p. 11) thinks the subcutaneous method is as good as the intra-venous if enough fluid be used. He selects different parts as the seat of the injection and repeats the injection two or three times a day.

At the meeting of the Medical Society of Hamburg, September 20, 1892 (DMW, 1802, pp. 906–908), after the full brunt of the epidemic had been experienced, the drift of the testimony concerning the subcutaneous and the intra-venous injection was, that the subcutaneous was excellent; and more practicable, especially in private practice, than the intra-venous, but that the latter was more striking in its results and could be resorted to if the subcutaneous did not appear to produce the desired effect.

INTRA-VENOUS INJECTIONS.

The use of intra-venous injections in cholera we owe chiefly to Hayem, whose work on the treatment of cholera is now classic (Hayem, Traitement du Cholera, Masson, Paris, 1885). The main part of the fluid injected is $\frac{1}{2}$ to $\frac{3}{4}$% solution of sodium chloride, to be injected hot (about 100° to 104° F.) to which Hayem has added, at different times, sodium sulphate and sodium carbonate. These solutions have been tried by various observers, but there is almost a concensus of opinion that the sodium chloride solution alone is all that is necessary. This method has been widely used and has been almost universally commended. Kutner (DMW, 1892, p. 795) uses the solution with ten parts of sulphate of soda to the litre, and injects two litres in twenty minutes, and this treatment is endorsed by Nothnagel and Kahler (DMW, 1892, p. 797).

Eisenlohr uses the simple salt solution $^7/_{10}$% and praises it highly. He also tried adding camphor and a little alcohol, but found the effect bad—gangrene was produced at the spot of injection.

Rumpf and Schede also advocate the simple salt solution. Rumpf (DMW, 1892, p. 878, 1893, p. 381) says the effects are variable, but sometimes very marked. He has seen no case where harm was done. The best sign is to have the kidneys begin secreting shortly after the injection, though sometimes there is no effect on the kidneys. Even in the worst forms Rumpf has seen a marked improvement more or less permanent in 25% of the cases. Nothnagel and Kahler also refer to the resumption of activity by the kidneys, saying that this often first takes place several hours after the injection. Schede (DMW, 1892, p. 907) has also noticed the striking results of his treatment and refers to the fact that the patients often relapse after one of these injections to be again stimulated by a new one. As long as the patient reacts to a new injection, Schede says the prognosis is favorable.

At the meeting of the Hamburg Medical Society at which Rumpf and Schede read their reports, Lauenstein (DMW, 1892, p. 907) endorsed all they had to say in favor of intra-venous injection, but differed with them in their unfavorable criticism of the subcutaneous method in comparison with the intra-venous. (See section on subcutaneous injection.) The intra-venous method is also preferred by Heyse (BKW, 1893, p. 20) as being more prompt and more marked in its action. Bethe (DMW, 1892, p. 1202) first tries the subcutaneous method, and if this does not take hold promptly, he resorts to the intra-venous without loss of time. Samter (DMW, 1892, p. 860) recommends the injection of salt solution in one vein with the concomitant abstraction of blood from another vein. He suggests this as a ready means of eliminating the toxines from the system.

This method was tried by Korach (DMW, 1892, p. 1053) who saw no advantage in it, over the simple intra-venous injection, which he praises very highly. One of the few to offer adverse criticism to intra-venous injection is Simmonds (DMW, 1892, p. 980), who found embolic lung abscesses in two cases, and was unable to ascribe these to any cause other than the intra-venous injections. E. Fränkel (DMW, 1892, p. 908) after 430 autopsies, says that he has never seen *dangerous lesions* follow the intra-venous method, though he has seen benign thrombi at the seat of injection, and benign infarctions in the spleen and in the kidney.

INTRA-ARTERIAL INJECTION.

The injection of saline solution into an artery is spoken of as Landois' method by Silbermann (DMW, 1892, p. 816) and recommended by him in severe cases where the intra-venous method seemed without avail. Schede (DMW, 1892, p. 907) tried this in sixteen desperate cases and had four recoveries. It will be of interest to members of this society to know that about the same time that the German articles above quoted were published, a similar suggestion was made in the BROOKLYN MEDICAL JOURNAL by Dr. Dawbarn, referring to a previous publication of his own on the same subject.

INJECTION INTO THE PERITONEAL CAVITY.

The injection of fluid into the peritoneal cavity has been somewhat widely practiced, especially in South America. Hayem recommended it in cases where the patient was very fleshy and a vein could not easily be found. Cantani (BKW, 1892, p. 922) gives a history and criticism of this method, referring its first use to Riva, and stating that autopsies on two cases of Armanni's, at Naples, showed that the injected liquid had been absorbed. Cantani is somewhat hypercritical, but he makes one good point, viz: that the subcutaneous method is safer in the hands of inexperienced operators.

LAPAROTOMY.

One case is reported in the Deutsche Med. Wochenschrift, 1892, p. 863, which is reviewed from the "Semaine Mèdicale" where laparotomy was performed, the small intestine entered and washed out with bichloride of mercury 1:3000, and then there was injected infusion of coffee, peppermint tea and water. The reaction was good, vomiting ceased, stools became less frequent, temperature rose from 31° to 36° C. (87.8° to 96.8° F.), pulse became perceptible again, but patient finally died.

§ VIII.

STATISTICS.

It was my purpose to make a careful comparison of the statistics from different hospitals, together with the line of treatment followed, but we all know how misleading statistics are unless properly handled, and, in the present case, a comparison of statistics as published would certainly be apt to lead us astray.

In the first place the severity of the disease in different places was markedly different and statistics from different places therefore cannot be compared. Then, again, the severity of the disease at different periods of the same epidemic varies greatly, and statistics differ widely for the same treatment when taken in cases at the beginning or at the end of an epidemic, or all during its course. So statistics in which more cases are treated and tabulated early in an epidemic can not be compared with those which are based on a few tabulated cases at the beginning and more at the end. Michael (DMW, 1892, p. 1025) gives an excellent illustration of how the severity of the disease at different times will modify statistics. He quotes Riederer, who said, September 30, that he had not saved a single patient by intra-venous injection, and later on obtained good results. Early in the epidemic Jolasse had only 11 per cent. of recoveries with the method, and was discouraged, while Eisenlohr who kept it up showed 35 per cent. of recoveries, including collapsed cases later in the epidemic. A method of gathering statistics which would yield most valuable results, if followed more generally, was that adopted by Lauenstein (DMW, 1892, p. 907) who grouped his patients in blocks of twenty and made a parallel study of different treatments on patients of the same class at the same time and place. Another source of error in statistics is the different classification by different observers, some call all mild cases cholerine and report a mortality in these cases as low as 2 per cent.

From the hopelessness, therefore, of finding a common standard by which the statistics could be compared, it is obviously better to avoid the confusion of picking them to pieces and trying to bring together the parts which may fairly be arranged for comparison. The observations of Wilmans and of Michael (see chapter on treatment)by which they got as good results omitting drugs, as routine treatment, as with them, is not to be overlooked, for the comforts of the patient would certainly be enhanced by this treatment. Again we may fairly ask the question whether our new methods of treatment yield better results than were obtained in former epidemics, and I think we can answer this question in the affirmative. Korach gives the mortality in previous epidemics in Hamburg at from 46 to 66 per cent. From tables published by Guthman (BKW, 1892, p. 933) I see recorded that there have been eleven epidemics of cholera in Berlin between 1831 and 1873. and the mortality has varied from 60 to 67.2 per cent. Previous to the adoption of transfusion methods experience, in the treatment of drugs had not lowered the death-rate, it being 67.1 per cent. (nearly the maximum) in 1873.

In the present Hamburg epidemic, notwithstanding the exceptional severity of a very large number of cases at the beginning of the epidemic, the mortality for the first 17,967 cases, was, according to Korach (DMW, 1892, p. 1053) 42 per cent. which is, after all, not such a bad comparison, taking into consideration the severity of the disease.

DISCUSSION.

The Chair: Dr. Kemp's important, instructive and suggestive paper is before you for discussion. I presume the doctor will be glad to answer any questions that may be asked, in connection with his special work at least.

Dr. Bartley: I rise to ask a question. In speaking of the introduction of the saline solution in the cellular tissue, or subcutaneously, the doctor mentioned a forked arrangement of the two points. Do I understand those were inserted one into each thigh?

Dr. Kemp: From the reservoir of hot saline solution there is a rubber tube ending in a forked metal tube, with a stop-cock in each branch. From the ends of this forked tube are rubber tubes ending in a trocar. One trocar inserted in each flank. The original practice, by Samuel, was to inject into the neck under the clavicle, but a death was reported from suffocation, and after that they generally chose a safer locality. Injecting into two places allows them to get in a large amount of hot salt solution in a shorter time. When injecting large amounts subcutaneously it absorbs very rapidly, but sometimes you are apt to get a larger lump than you want. In that case you can shut off the stop-cock on that side and turn the stream into the other side, and by the time you have a lump on that side the first lump has gone down, and you can then repeat the process.

Dr. Bartley: By the flank, you mean in the walls above the hip?

Dr. Kemp: Yes, sir.

Dr. Bartley: And what would be the objection to allowing the two streams to flow at once?

Dr. Kemp: None whatever. They often do so, only if you get a lump on one side you can shut that stream off, and yet not stop the infusion altogether, allowing the other side to flow.

Dr. Bartley: In regard to the thickening of the blood—does that come early or does it come late—does it come before the water of the tissues is entirely exhausted? Generally we understand that in the drain of ordinary diarrhœa, such as the diarrhœa of children in summer—inflammatory diarrhœa or even cholera infantum—the first effect is to drain the tissues of water, and then afterwards perhaps to concentrate the blood, the blood remaining constant in specific gravity until the water in the tissues is almost entirely absorbed ; or if the drain takes place as hæmorrhage from the blood, that the blood vessels suck up the water from the tissues so as to keep the specific gravity about the same, until the water in the tissues is nearly all exhausted. Does this thickening of the blood take place at the stage of collapse or earlier ?

Dr. Kemp : It takes place considerably earlier. It is due to the excessive loss of water through the intestine. I do not really know whether any observations have been made on that question of the specific gravity of the blood being maintained. I think that is probably what we should expect. Through the capillaries, the lymphatics throughout the system are prepared to furnish water back to the blood as soon as the blood loses it to the intestines. I think the equilibrium would be maintained as far as possible.

This contraction of the smaller arteries is an interesting thing. We lose the radial pulse when the blood becomes diminished in volume from the excessive loss of water, and although the blood, thick as it is, is flowing around through the heart and abdominal and thoracic viscera, yet if we had to supply all the body the man would die from cerebral anæmia. It is a conservative process.

In regard to vomiting. It has often been found to be so excessive as to exhaust the patient. In such a case it has to be stopped. If it occurs without nausea it is best to let it go on. Urea has been found in the vomit, as well as other poisons that are in the blood.

Dr. Chas. H. Shepard : It has been a pleasure and privilege to have listened to such a paper, which shows so much research and industry. On receiving notice of what the discussion would be on to-night I had a desire to say a few words on the prevention of cholera by heat, and if it is agreeable and not too late, I would like to read them :

The possible advent of cholera in our midst during the coming summer renders all matters of hygiene of supreme importance, therefore, whatever may contribute to our welfare in that direction is at least worthy of consideration. The streets should be cleansed, our houses purified, waste places swept up, and our surroundings carefully scrutinized, but above all other measures our bodies should be placed in the highest sanitary condition.

In calling attention to the value of heat as a prophylactic, and a general sanitary agent, it is at the same time to be acknowledged that heat is a perfect disinfectant ; even the surgeon has come to use it in operations, and the value of steam as a disinfectant depends wholly upon the heat contained therein. Our food and our drink are rendered both more palatable and germ proof by the action of heat. We can rely perfectly on heat as a means of sterilization. The germ cannot live in food that has been thoroughly cooked, nor will it survive in water, milk, tea, or coffee, that have been on the fire long enough to boil. Heat is also death to the cholera germ, if it is applied in air, steam or water.

Dr. Sternberg says that ten minutes' exposure to a temperature of 140 degrees Fahrenheit may be relied on for the destruction of this spirillum.

Dr. J. T. Talbot, of Boston, says : "There is no disinfectant or antiseptic equal to heat in a high degree, and in all those conditions depending on germ life, they have ten times the resisting power of drugs. Heat, raised to a sufficient degree, will in every case destroy the germs."

Medical Director Bogart reports that when on government vessels in Chinese and Japanese seas in 1878 and '85 the cholera broke out among the crew, but was promptly checked by cleanliness and heat. All clothing, bedding, and personal effects were subjected to dry heat, and the ships were steamed by their own boilers.

It has been demonstrated to the satisfaction of many that the cholera germ is a vegetable, and not an animal growth which can be suffocated by fumigating gases. This vegetable, like the yeast plant, needs a moderate amount of heat for its development, but apply more heat to the yeast plant or cholera germ, say 140° Fahrenheit, and the germ is dead.

We have positive knowledge that this disease is spread solely through an introduction of the poison into the alimentary canal. It is neither inhaled nor absorbed through the skin. Therefore, its propagation is always from the use of cholera-contaminated water or food. The true antidote to cholera is to burn or otherwise consume all sewage, instead of dumping it into the waterways. The most perfect personal defence against bacteria of all kinds, but particularly of cholera, is a vigorous digestion in a well-conditioned body. The one fluid that is absolutely fatal to the bacillus of cholera, is healthy gastric juice.

It would seem from a series of experiments on themselves, conducted by Prof. Pettenkofer, and Prof. Emmerich, of Germany, wherein they each swallowed one centimetre of fresh culture of comma bacillus, direct from Hamburg, that measures directed against the germ itself, such as quarantine, disinfectant, etc., were less important than attention to hygienic conditions, diet, and personal surroundings, which may diminish predisposition. This most desirable consummation is to be attained by the action of heat, through a process that commends itself to every thinking mind. It is at the same time both pleasurable and invigorating. The highest medical authorities in this and other lands have given their fullest endorsement of its advantages. It has stood the test in several previous epidemics with great success. The great need of our country is large public establishments, where the populace can resort at all times, and by a complete course of sanitation ward off all danger of an epidemic.

During the epidemic last year in Russia, an investigation was made to ascertain the mortality among the Jews, and it was found to be only forty victims out of a total mortality of a quarter of a million. This fact is a most emphatic comment on the Mosaic laws of cleanliness given that people over two thousand years ago.

A man in England once treated cholera patients by wrapping them up in blankets and placing them before a hot fire, and he claimed to cure every case he undertook. Mr. Urquhart, an Englishman, who first called attention to the value of heat as a remedial agent, during an epidemic in Turkey, subjected every member of his household to hot air treatment daily, with the result of complete immunity, while deaths were constantly occurring in his immediate vicinity. During the prevalence of cholera in Cork, Ireland, some years ago, the men employed in cleaning out the brewers' vats, wherein was heat sufficient to cause profuse sweating, were free from the disease, and the other workmen in the establishment petitioned to be put at that work.

Over thirty years' experience in the use of heat as a remedial agent, has demonstrated that all diseases of a diarrhœal nature are quickly controlled by the proper use of heat. By no other means can one so thoroughly fortify himself against the cholera, as well as other diseases, as by the weekly use of a hot air bath. This is complete sterilization of the body itself. The proof of this statement is demonstrated by every Turkish bath establishment throughout our land, and it only needs an unbiased examination to convince the most skeptical.

Dr. Geo. A. Evans: I would like to ask Dr. Kemp if he is familiar with the treatment that we were told by the lay press was suggested and made use of by an American physician from Chicago —rectal injections of soap suds. He attracted so much attention that he was invited to read a paper before the New York Academy of Medicine. I have seen no further reference to that measure, but perhaps Dr. Kemp may have, in some of the articles he has read on the subject.

Dr. Kemp: They did use soap suds in place of the tannin in Hamburg, and found it worked very well. It cleanses the intestine very well, but lacks the astringent property of the tannic solution. The great trouble was they did not use enough of the solution. They found that if they used a gallon of this tannic solution that it would do good. They used the soap suds in Hamburg side by side with the tannin and they found either one answers very well and is recommended in the stage after the collapse—in the so-called cholera-typhoid. It cleans out the intestine and removes the particular matter whatever it is. The use of a large amount of warm water in that way appears to be the beneficial part of it.

Cantani claims you can apply heat in that way, where it is most needed, by giving a large injection of hot water. The tannic solution has the advantage of precipitating the poison, is a good local astringent, and cannot do any harm.

Dr. C. C. Henry: Has the injection of plasma been tried?

Dr. Kemp: The injection of serum has been tried, but not, so far as I know to a very great extent. We know it is risky to inject the serum of one animal into another, and it would be so with man. It is likewise true that you cannot always find a man to furnish the serum; besides, I think the analysis of the rice-water stools shows that there is comparatively little albumen lost from the blood, that it is nearly all water and sodium chloride. The albumen remains behind, and all you have to make good is the loss of water and salt, and meeting those indications we get good results. The intra-arterial injection was used by a Hamburg physician, where the intra-venous injection did not take hold, and he thinks he saved the lives of four patients by it.

A New Surgical Work.—*A System of Surgery*, edited by Frederic S. Dennis, M.D., and John S. Billings, M.D., is announced by Lea Brothers & Co. as shortly to appear, in three imperial octavo volumes. The list of contributors embraces such names as W. T. Bull, Charles McBurney and Robert F. Weir, of New York; Councilman, Porter, Richardson and Warren, of Harvard; Carmalt, of Yale; Keen, White, Roberts and Wharton, of Philadelphia; Welch, of Baltimore; Park, of Buffalo; Conner, of Cincinnati; Mudd, of St. Louis; and Senn, of Chicago.

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EDITORIAL.

POISONOUS AND EDIBLE FUNGI.

One of the most praiseworthy acts ever performed by the National Government is the attempt to familiarize the people with the differences between the poisonous and edible fungi of the United States, for there is beyond doubt a vast amount of food-material left to decay in the woods and fields which might be utilized by the poor, did they but know the good from the bad. The Department of Agriculture has published a series of pamphlets, beautifully illustrated, which will assist those who are interested in this subject, whether their interest be scientific or practical. We cannot credit the following statement made in one of the New York dailies :

"As an instance of the ignorance in America on the subject of toadstools, it has been noted that in a publication of the United States Department of Agriculture there were two plates, each containing twelve specimens, and of the twelve toadstools thus officially declared to be poisonous, nine were not poisonous at all and six were very good to eat. On the plate showing edible mushrooms several were by no means fit for food."

It is hardly possible that the United States Government would place so important a work in the hands of incompetent men, and until some more competent authority pronounces the publications untrustworthy we may regard them as in all respects credible.

We are gratified to learn that the State of New York is preparing a chart describing and representing the edible and poisonous fungi of the State. We presume that this is to be done under the supervision and direction of Professor Charles H. Peck, State Botanist, the most competent mycologist of the United States.

THE TREATMENT OF DIPHTHERIA BY ANTITOXIN.

If the claims made by its advocates for this method of treatment prove true, its discovery will be the greatest boon to humanity since the days of Jenner and his immortal contribution to the cause of humanity. In the Kaiser Friedrich Children's Hospital in Berlin, before the use of antitoxin, in 1,081 cases of diphtheria then treated, the mortality was 38.9 per cent. Since March, of 128 cases treated with antitoxin the mortality has been but 13.2 per cent.

Dr. Cyrus Edson, Commissioner of Health, of New York, has made the following statement :

"As tested by Professor Koch and those associated with him, in 250 cases the antitoxin treatment produced the results noted below :

When the treatment was applied within the first twenty-four hours, all cases were cured. When cases were inoculated on the second day of the disease, 97 per cent. recovered ; when inoculated on the third day, 87 per cent. recovered; on the fourth day, 76 per cent.; on the fifth day, 57 per cent. By the treatment any person who has been exposed to the disease can be made free from further hazard if the symptoms have not been developed. If cases are treated within thirty-six hours, the mortality can be reduced to practically nothing. It can be seen how wonderful the treatment is when it is understood that the average mortality of true diphtheria is 27 per cent."

Caution is, however, to be exercised as to the kind of antitoxin employed, and those who intend to use the remedy should investigate this most carefully.

VACCINATION AND THE PUBLIC SCHOOLS.

It will be remembered that some months ago, two of the principals of Brooklyn Public Schools, carrying out a rule of the Board of Education, refused to admit children who were unvaccinated. Applications were made to the Supreme Court for mandamuses to compel their admission, Justice Willard Bartlett denied the applications in the following decision:

"The avowed purpose of this application is to test the constitutionality of Section 200 of the Public Health Law of this State, which provides that no child or person not vaccinated shall be admitted or received into any of the public schools of the State, and commands the trustees or other officers having the charge, management or control of such schools to cause this prohibition to be enforced. Upon the oral argument I expressed the opinion that this enactment was a valid exercise of the police power of the legislature, and that view has only been confirmed by an examination of the authorities cited in the briefs of counsel. A common school education, under the existing constitution of the State of New York, is a privilege rather than a right. It is created by legislation, and subject to legislative regulation. * * * It follows that the State can certainly exercise this discretion by debarring from attendance at the public schools such persons as are unwilling to adopt a precaution which, in the judgment of the legislature, is essential to the preservation of the health of the large body of scholars.

"In California there is a statute which provides for the exclusion of unvaccinated children from the public schools. The constitutionality of the law was questioned in the Supreme Court of that State in 1890, one of the objections being technical and the other being that the subject of the act was not within the scope of a police regulation. Both objections were overruled, the Court declaring that as vaccination was the most effective method known of preventing the spread of small-pox it was for the legislature to determine whether the scholars of the public schools should be subjected to it and the legislature was justified in deeming it a necessary and salutary burden to impose upon that general class.

"To vaccinate a person against his will, without legal authority to do so, would be an assault; and it was suggested on the argument, by the learned counsel for the petitioner, that the statute of this State providing for the compulsory attendance of truant children at the public shools, when construed in connection with the provisions of the public health law relative to vaccination, would have the effect of obliging a child to submit to an assault at the hands of the school authorities. No such question as this, however, arises in the present case. The only effort here is to insist upon a condition which the legislature has made a precedent to the exercise of a privilege. It will be time enough to decide whether the State can force a child to attend school, and force him to be vaccinated as a prerequisite to such attendance, when an officer attempts such a proceeding.

"I may add that the very point upon which this case turns is very different from that which was before Mr. Justice Gaynor, in the matter of Smith and Cummings, where the Commissioner of Health restrained the petitioners from their liberty until they consented to be vaccinated, although the legislature had conferred no such power upon him.

"Application denied."

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Regular meeting, May 15th, 1894.

The President, Dr. Geo. McNaughton, in the chair.

There were about fifty members present.

The minutes of the April meeting were read and approved.

The Council reported favorably upon the following applicants and recommended that they be elected to membership:

Drs. H. Clifford Elliott, Hugo Kœthe, Willis H. Philee, Jacob Londoner, B. C. Collins and Harry W. Lincoln.

ELECTION OF MEMBERS.

The following having been regularly proposed and favorably passed upon by council, were declared elected to membership:

Drs. J. H. Wells and Mason L. Smith.

APPLICATIONS FOR MEMBERSHIP.

The following applications for membership were presented:

Dr. Earl Hugh Mayne, Bath and Eighteenth Avenues, Bath Beach, Bell. Hosp. Med. Coll., 1893; proposed by Dr. G. McNaughton; Dr. J. H. Raymond.

Dr. Geo. E. West, 360 Greene Avenue, L. I. C. H., 1885; proposed by Dr. Geo. McNaughton; Dr. J. H. Raymond.

Dr. Wm. E. Sylvester, Kings County Insane Asylum, Dartmouth, 1879; proposed by Dr. J. T. Duryea; Dr. C. F. Barber.

Dr. Alfred S. Ambler, Kingston Avenue Hospital; L. I. C. H., 1893: proposed by Dr. J. T. Duryea; Dr. C. F. Barber.

Dr. H. F. C. Muller, Albany Med. Coll., 1887; proposed by Dr. Geo. McNaughton; Dr. J. H. Raymond.

Dr. S. J. McNamara, 325 Union Street, L. I. C. H., 1892: proposed by Dr. L. W. Pearson; Dr. C. F. Barber.

A communication was received from Health Commissioner Emery, requesting the appointment of a committee to confer with similar committees from the Kings County Medical Association and the Homœopathic Medical Society of Kings County, with the view of a revision of the present method of recording Vital Statistics in the City of Brooklyn.

Dr. Chase moved that the request of the Commissioner be complied with and that such committee be appointed by the chair.

SCIENTIFIC BUSINESS.

Dr. Walter B. Chase presented a paper on "The Treatment of Puerperal Septicæmia." Discussed by Drs. Van Cott, Dickinson, Stuart, Hyde and Polak.

Dr. R. L. Dickinson presented a paper entitled "What is a Reasonable Standard for the Medical Civil Service Examination for Firemen and Policemen?"

Discussion by Dr. Truman H. Backus, of the Civil Service Commission, and Drs. Chase, Hutchinson and Maddren.

DISCUSSION.

Dr. W. B. Chase: There is a single inquiry I would like to make. The position and character of the gentlemen making up the Civil Service Commission of Brooklyn is above reproach, and I think it is a point we can well take to heart that their labors, which have been onerous and which have been so willingly extended to the City, have not been thoroughly appreciated; but the question I desire to ask Dr. Backus—and I am not referring to the present, but to a former administration—is, whether it was not possible that the good intention of the Civil Service Commission of Brooklyn could be defeated by the men who had the power of making the appointments; whether or not they could take the list and run it over and pick out from that list men from one political party alone, and relegate the others to the necessity of a second or third examination. This, distinctly understand, is no reflection on the Commissioners themselves, but is there a defect in the law, whereby such a thing could be accomplished?

Dr. Backus: I think not, and any gentleman could make the investigation here such as I would make in regard to the Police Department. Every police officer on the last eligible list has been appointed in the exact order of his place. Number one was appointed first, and number twenty-one twenty-first, without a simple deviation. The Police Commission made the appointments in that way.

I am assured by the Secretary, and I made that investigation and found it to be undeviating in its precision, and I am informed by the Police Department that this has been the custom.

The law allows the Commission to send twelve men if ten are called for; if one is called for we must send three, and then the Commission makes the selection of which one of the three it chooses.

As a rule, seven out of ten men who professed to be members of one political party previous to the first of January, now profess to be members of another political party.

Dr. Chase: The answer is gratifying, but I had in mind the refusal to appoint a gentleman who was a veteran—I don't know whether it was on the Board of Health, or otherwise—but if I understand the matter correctly, this man was eligible for several years, but was not appointed until a recent period.

Dr. Backus: The eligible list expires at the end of a year, so the statement as you understand it could not be true. The eligible list goes off at the end of a year and a new examination is had and a new list made. That has been the regulation up to the present time. The Commission are now considering the plan of making it two years.

(The remainder of the discussion will be found in September number, page 558).

REPORTS OF COMMITTEES.

On behalf of the Committee on the President's address and recommendations contained therein, Dr. Wm. Maddren presented the report.

Dr. West moved, That the report be received, and the discussion of the recommendations contained therein be deferred to the next meeting of the Society, and that a copy of said report and recommendations be printed and sent to every member of the Society.

Seconded and carried.

Dr. Maddren moved, That the President's address be also printed and a copy accompany the report of the Committee sent to each member of the Society.

Seconded and carried.

Dr. West suggested that the expense of printing could be saved by having the President's address and the report of the Committee thereon printed in the June number of the Brooklyn Medical Journal, and moved to reconsider the motion authorizing the same to be otherwise printed.

Seconded and carried.

Dr. West then moved, That the Secretary be instructed to secure the publication of the President's address and the report and recommendations of the Committee upon same, in the June number of the Brooklyn Medical Journal; that in case that is not practicable they shall be printed and sent to each member with the notices of the June meeting; and that in case they are printed in the Journal, the notice of the June meeting shall call attention to their being so printed therein.

Seconded and carried.

NEW BUSINESS.

Dr. Wm. Hutchinson, in accordance with the statutory law, gave notice of an election to take place June 1st next, to fill the offices of the two members representing the Medical Society of the County of Kings on the Board of Pharmacy of the County of Kings, made vacant by expiration of term of service on June 1st next.

The Council recommended for the consideration of the Society the following resolution:

Resolved, That this Society recognizes in the recent arrest, humiliation and trial of one of its members upon charges wholly unsustainable, that the good name and welfare of the medical profession is imperilled. And we therefore earnestly protest against all procedures compromising the interest of any individual when not based upon careful and deliberate investigation.

On motion of Dr. Maddren, duly seconded and carried, the above resolution was adopted as the sense of the meeting.

The Librarian, Dr. Wm. Browning, stated that the entire library of Dr. Geo. R. Cutter, a late member of the Society, had been donated to the Society by his widow; and moved,

That the Secretary be instructed to communicate with Mrs. Cutter and convey to her for this very generous donation the thanks of the Society, as the unanimous vote of this meeting.

Seconded and carried; so ordered.

Dr. West stated that the City officials were considering the building of a plant for the disinfection of infectious material, such as clothing, bedding, etc., and suggested the propriety of the Society expressing its approval of the same, and moved the following:

That the Secretary be instructed to communicate with the Health Commissioner and state to him that the Society is informed that the City officials are contemplating the erection of a disinfecting plant, and that we as a medical society commend such a project and urge upon the City the necessity of such a plant for the interest of the city at large.

Seconded and carried.

Dr. West also referred to the recent epidemic of small-pox and the various invidious criticisms that had been made regarding the methods for its control adopted by the Health Commissioner, and moved,

That the Secretary communicate with the Health Commissioner and state to him that the Medical Society of the County of Kings commend his energy, efficiency and zeal in contending with the recent prevailing epidemic of small-pox, and that we recognize a wise administration has saved the City from being overwhelmed with this dread disease.

Seconded and carried.

The Secretary stated that the Council thought it wise to make the hour for convening the regular meetings of the Society 8.30, instead of 8 o'clock, and referred the matter to the Society for action.

Dr. Wm. Browning moved that the regular meetings be hereafter called at 8.30 o'clock.

Seconded and carried; so ordered.

There being no further business, on motion the meeting adjourned.

David Myerle, M.D.,
Secretary.

BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

Sixteenth regular meeting, January 12, 1894.

Dr. Sherwell in the Chair.

Dr. Morton presented a case of elephantiasis telangiectodes. J. D., æt. seventeen, was burned by an explosion of powder when about nine years old. The left side of the face received the greatest amount of injury. The following winter the left lip began to swell, which extended until the whole cheek became involved.. Since then the left side of the face has been larger than normal, but at times the swelling increases and lasts from five to six weeks. It does not feel very tense, and there is no pitting on pressure; by making firm counter-pressure the swelling of the lip can be entirely reduced. The lesion seems to be situated in the blood vessels and not in the lymphatics. This nævoid condition of the deep vessels produces an overgrowth of the overlaying tissues from the hyper-nutrition. The case in some respects is almost an exact counterpart to the case pictured in Hyde's book on skin diseases.

Dr. Morton intended using electrolysis in treating the case.

Dr. Winfield presented a case of gumma of the skin situated over the lachrymal duct; when first seen it was thought to be an abscess, it having been opened under that impression when the true nature was discovered. The lesion was rapidly improving under anti-syphilitic remedies.

Dr. Winfield also presented a boy with a mixed eruption. When he was first seen the scalp and face except the chin was the site of a seborrhœic eczema, the scales were dark and greesy. At times there was considerable discharge from the inflamed surfaces. The patient was put on ergot and tonics internally and a mild resorcin unguent externally. The eczema of the scalp rapidly improved, but that of the face seemed to remain quiescent. About a month after attention was called to some small spots having all the appearance of psoriasis; these were thickly scattered over the extensor surfaces of the arms and back. This psoriatic process rapidly increased until all the extensor surfaces became involved. Over the sternal portion of the chest there was a typical seborrhœic patch. The case was shown to demonstrate the possibility of two cutaneous diseases being present at the same time. Dr. Morton thought that this case was instructive inasmuch as it demonstrated that there was some very close connection between seborrhœic eczema and psoriasis.

Dr. Sherwell thought it was a symbiosis, that is a combination of two diseases into one. He thought that this case first began as an eczema, which being in a psoriatic subject subsequently developed scaly patches which partook of both the psoriatic and eczematous nature.

Dr. Morton presented a case for diagnosis prior to an operation. H., æt. about forty. Eighteen months before he consulted the Dr. he noticed a slight enlargement of the epididymis, which gradually increased until the whole testicle became involved. There was no history of syphilitic infection. The inguinal glands appeared normal. And there seemed to be no trouble with· the prostate.

Dr. Mosher thought the disease was syphilis, because of the rssemblance to a personally observed case which had an almost identical history with the one under discussion.

Dr. Morton said that anti-syphilitic remedies had no effect on the swelling in this case.

Dr. Winfield presented a case with the following history: A young man twenty-one years old. For five years he had been troubled with a warty ulceration of the wrist. It first began as a small pabule which soon became warty as the process enlarged; healing took place in the center, an irregular scar remaining. The general condition of the patient was bad, he was pale and anæmic and had a slight cough. His father and one sister died of phthisis. Drs. Jelliffe and Morton thought it to be a case of lupus, while Drs. Sherwell and Raynor agreed with Dr. Winfield in the diagnosis of tuberculosis verruccusis cutis. * * *

Seventeenth regular meeting, February 9, 1894.

Dr. Sherwell, the President, in the Chair.

Dr. Morton presented a case of tuberculosis of the testicle. J. M., æt. forty. About two years ago, after lifting a heavy weight he noticed a peculiar swelling in the right testicle. This continued for some time, until the base of the testicle became the seat of a fungating mass which healed under appropriate treatment, until there is only a small sinus left.

Dr. Morton also presented the testicle removed from the patient shown at the January meeting. There are patches of well-marked cheesy degeneration scattered through the entire organ.

Dr. Jelliffe exhibited a slide of skin taken from a patient suffering from Addison's disease. The increase of pigment in the rete Malpiggi was beautifully demonstrated. He also showed a slide taken from a pearl of molluscum contageosum, showing the so-called psorosperms.

Dr. Sherwell demonstrated that the psorosperms were nothing more or less than spoiled epithelium. This was the view he had always taken of the subject. * * *

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

AN INTERNATIONAL SYSTEM OF ELECTRO-THERAPEUTICS; FOR STUDENTS, GENERAL PRACTITIONERS, AND SPECIALISTS. By Horatio R. Bigelow, M.D., and Thirty-eight Associate Editors. Thoroughly illustrated. In one large Royal Octavo volume, 1160 pages, Extra Cloth, $6.00 net; Sheep, $7.00 net; Half-Russia, $7.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This is a work written by men who have given special attention to the uses of electricity in medicine. The best idea of the scope of the work will be obtained by giving the title of the subjects treated. The preface is written by Dr. Bigelow. The introduction is by Dr. Herdman, of Ann Arbor, Mich., and is a plea for the special study of electro-therapeutics. This is like the plea that almost every man makes for the study of a subject in which he has a special interest.

2. Electro-Physics, by A. Wilmer Duff, Lafayette, Ind. It is a very concise and clearly written article.

3. Animal Electricity, by Wesley Mills, Montreal, Canada. It deals with what is known of the Gymnotus, Torpedo and other species of Rays.

4. Static Electricity and Magnetism, by Henry McClure, Cromer, England.

5. Faradic Induction Current; Electro-Magnetism; Electro-Massage and Instruments, by Geo. J. Englemann, of St. Louis.

6. Galvanism, by J. Mount Bleyer, of New York. This is an historical sketch of the use of electricity which is very entertaining and full in its treatment. The various forms of galvanic apparatus, Milliampèremeters, etc., are illustrated and their merits discussed.

7. Electro-Physiology, by A. P. Brubaker, Philadelphia.

8. Electro-Diagnosis, by W. F. Robinson, Albany. The subject is very clearly set forth and cannot fail to be intelligible to the practitioner who seeks for information on this subject.

9. Cataphoresis; Anodal Diffusion; Electrical Osmosis or Voltaic Narcotism, by Frederick Peterson, of New York. This is a very interesting subject and is well described by the author with an account of many observations by himself.

10. Intestinal Occlusion Treated by Electricity, by Dr. Larat, Paris, France.

11. Diseases of the Alimentary Tract; Diseases of the Liver and Kidneys; Gout and Rheumatism, by A. D. Rockwell, New York.

12. Electro-Therapeutics of Diseases of the Lungs and Heart, by N. S. Davis, Chicago.

13. Diseases of the Uterus, by G. Betton Massey, Philadelphia.

14. The Electrical Treatment of Fibroid Tumors of the Uterus, by Drs. Grand and Farmaque, Paris, France, Assistants to the Clinic of Dr. Apostoli.

There is an introductory and historical sketch. The article is an exposé of the views, methods and apparatus of Apostoli. This article is followed by one entitled:

15. A Discussion of the Electro-Therapeutic Methods of Apostoli and others, by J. H. Kellogg, Battle Creek, Michigan.

16. The Treatment of Diseases of the Uterine Appendages by Electricity, by Augustin H. Goelet, New York.

17. Engorgements and Displacements of the Uterus, by Dr. A. Tripier, Paris, France.

18. Disorders of Menstruation, by A. Lapthorn Smith, Montreal, Canada.

19. Treatment of Diseases of the Female Urethra by Electricity, by Franklin, H. Martin, Chicago.

20. Ectopic Gestation, by Carter S. Cole and Geo. W. Jarman; revised by Egbert H. Grandin, New York.

21. Treatment of Cancer of the Uterus by Electricity, by I. Inglis Parsons, London, England.

22. Facial Blemishes, by Henrietta P. Johnson. with illustrations by Geo. H. Fox, New York.

23. Electricity in Diseases of the Skin, by Plym S. Hayes, Chicago.

24. Diseases of the Nose; Naso-Pharynx; Pharynx and Larynx, by Charles E. Sayons, Paris, France.

25. Ophthalmology, by L. A. W. Alleman, Brooklyn, N. Y.

26. Diseases of the Brain, by C. Eugene Riggs, St. Paul. In this article Dr. Riggs, in speaking of the direct application of galvanism to the brain in the form of continuous current or of voltaic alternatives, states that "The indication for the use of voltaic alternatives in nutritional and organic cerebral disease is pallor of the optic discs. It is my uniform custom before applying voltaic alternatives to make an examination of the background of the eye. Where there is any indication of a congested optic disc they are absolutely contra-indicated." Further on he says: "The eyes should be examined from time to time to afford indications for or against its continued use." Now this appears all very plain, but is it so?

One who has done much work with the ophthalmoscope knows how impossible it is to decide if the circulation of the fundus oculi is changed, that is if there be anæmia or congestion. I do not believe it is possible to do so with any degree of certainty, it must be mere guess-work, and the decision influenced in the mind of the observer by symptoms presented by the patient. Ask any experienced ophthalmologist who looks at many more eyes a day than any neurologist, and you will find that he considers it very doubtful if not impossible to determine the presence of anæmia or congestion of the fundus of the eye without other lesion of the fundus or optic neuritis.

We also find paralysis agitans and chorea treated in this article; why, it is difficult to say, for surely they are not brain diseases any more than they are spinal cord diseases. But this may have been simply a matter of convenience.

27. Neurosis, by Morton Prince, of Boston. As Dr. Prince says, "Neuroses are the kind of nervous diseases in which favorable results are obtained by electricity. Under the head of Technique of Treatment will be found an excellent statement of the subject, and with which I fully agree."

27. Diseases of the Spinal Cord, by William J. Morton, New York.

28. Diseases of the Peripheral Nerves, by William M. Leszanky, New York.

29. Electro-Thermal Surgery, by John Byrne, Brooklyn, N. Y.

30. Treatment of Strictures by Electrolysis; Hypertrophy of the Prostate, by Robert Newman, New York.

31. Abscesses; Adenomas; Adipose Tumors; Aneurisms; Callosities; Hæmorrhoids; Torticollis; Specific and Malignant Diseases of the Rectum; and Ulcerations, by Wm. H. Walling, Philadelphia.

32. Incontinence of Urine; Orchitis; Hydrocele; Spermatorrhœa; Gonorrhœa, by W. F. Robinson, Albany.

33. The Uses of Electricity in Obstetrics, etc., by E. L. H. McGuinnis, New York.

34. Electricity in Diseases of Childhood, by Mary Putnam Jacobi, New York.

35. Adhesions in the Acute and Chronic Inflammatory Disorders of the Female Pelvis, by I. M. Baldy, Philadelphia.

As one looks over the chapters of this work he is inclined to express surprise that so many diseases can be treated with one remedy. There is a tendency with some to claim good results in all diseases by electricity. One must not be misled by such claims. Seeing that this work is written by men who are enthusiastic as to the uses of electricity in medicine, it is fairly free, on the whole, from exaggerated statements and claims for its uses and advantages. The work, taken as a whole, is an excellent one, and the practitioner of medicine who wishes information upon the subject will find it here. It is well printed; but many of the illustrations are very poor in execution for a work of this magnitude and price. The arrangement of the book is an awkward one, instead of being paged continuously, as books usually are, it is divided into sections, apparently without any special method, each section is lettered and paged separately, so that one cannot pick up the book and see how many pages there are in it without making a calculation. If you turn to the index to find "Tension, Electric" you are referred to A—95. If you look for "Ataxic Paraplegia" you find it paged K—116. The letter is for the section and the number for the page of that section. What earthly purpose such an arrangement can serve it is impossible to divine. J. C. Shaw.

A Case of Contusion and Rupture of the Ileum. By F. H. Wiggin. M.D. Reprint from N. Y. Medical Journal, January 20, 1894.

This case is of special interest as being the second one of intestinal resection in which Maunsell's method of end-to-end union has been adopted in New York or in its vicinity. In this case Dr. Wiggin disinfected the general peritoneal cavity with hydrogen peroxide in fifteen volume strength, and closed the abdominal wound, leaving the peritoneal cavity filled with hot, sterilized salt solution (0.6 per cent) in order to lessen shock, to present adhesions, to aid in the readjustment of the intestines and omentum to their proper positions, to lessen the danger of septic peritonitis and to aid by osmosis the action of the bowels.

In the discussion of the paper Dr. Townsend spoke of the advantage of peroxide of hydrogen in epistasis, regarding it as better than plugging and suggested that it might be useful in oozing in the abdominal or pelvic cavity.

The subject of anæsthetics was also discussed and the necessity of having them administered by those thoroughly competent.

E'FFIGIES JOHANNIS PORDAGE.

PETRUS FORESTUS
MEDICUS.

THE

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JOSEPH H. RAYMOND, M.D.,
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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

THE TREATMENT OF CONSTIPATION IN CASES OF TEA POISONING.

BY JAMES WOOD, M.D.
Visiting Physician to the Brooklyn Central Dispensary.

In the report* of the first one hundred cases of tea poisoning which came under my observation 40 % had marked constipation, in some instances bordering on obstipation, and 15 % were troubled with alternating constipation and diarrhœa.

The condition of irregularly acting and constipated bowels occurring in so large a per cent. makes its treatment one of the most important in the general care of tea inebriates. In many cases we have to deal with obstinate secondary symptoms resulting from the constipation and our procedure in alimentary therapeutics had to be regulated accordingly.

A number of cathartics and laxatives were experimentally used and out of the many but a limited number were at all suited to the derangement. The method of trying these agents was to use them separately and then in combination with such adjunctive drugs as were procurable. At one time colocynth seemed to give good results, but the percentage of failures of permanent relief were so great that it had to be abandoned. The same might be said of gamboge, euonymin, baptisin, rhubarb, juglandin, iridin and aloes. On account of the good action obtained from the rhamnaceæ in cases of constipation from other causes than that mentioned above cascara sagrada was given a thorough trial. It seemed to be peculiarly fitted for this condition and to be efficacious in regulating the several functional derangements.

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* American Medico-Surgical Bulletin, Sept., 1st. 1894.

In the treatement of the constipation which results from the too free use of the infusion of tea it would be manifestly wrong to expect a laxative to re-establish a deranged equilibrium without aid from other parts of the body.

The plan which was found to give the best results was to commence by interdicting the use of tea, coffee or any form of liquor. This must be insisted upon in the strongest manner, else the patients, like all inebriates, will be found indulging their annoying importunities for tea.

The alimentary canal should be thoroughly cleared out by giving a rather large dose of calomel and jalap (*āā* gr. viii.) at night to be followed in the morning by Rochelle or Epsom salts (℥ ss to ℥ iss). This will assure an almost completely empty intestine and the absence of fermenting material which in a large majority of cases produces a true auto-intoxication. The patient should be kept on hot milk for several days and the only medication being two grains of caffeine and eight grains of sodium bromide every four hours. This quiets the irritable nervous condition and the limited food gives nature an opportunity to regain lost tone.

The use of cascara sagrada is commenced at this time, the dose being from fifteen to forty minims every four hours. From the third to the tenth day the patient's diet is increased to the proper amount as demanded by the work performed, care being taken to eliminate such stimulating and non-nutritious articles as the starch and sugars, so far as possible.

The dose of cascara sagrada mentioned above may be increased and the time for giving it lengthened until the patient's bowels will move freely at least once a day by the employment of from a half to one drachm at night.

In a number of cases, when this regularity has been accomplished, the following prescription will be found of great use :

℞

Inspissated Ox bile, pure (Merck)	2 scruples.
Sulphate of Quinine	1 scruple.
Sulphate of Strychnia	1 grain.
Extract of Cascara Sagrada	1 scruple.
Extract of Euonymus	2 scruples.

Extract of Gentian, a sufficient quantity.

Divide into forty (40) capsules. Two are used morning and night.

The inspissated fel bovis prevents to a large degree intestinal decomposition, accelerates peristaltic action, improves the intestinal digestion and increases and hastens absorption. In being taken up by the liver it furnishes a fresh impulse and available material for the formation of new bile. The strychnia serves as a bitter tonic and a stimulant to the spinal centres, and the nerves of the splenic arcade and, in turn, the glands which they supply resume their former activity. The euonymus is a cholagogue cathartic and stimulates the liver to secrete a better quality of bile. Enough of the cascara is used with the euonymus to assure a good passage from the bowels daily.

In a number of cases Fowler's solution is given so soon as the bowels are moving daily and often with excellent results. The preparation of cascara which is given the preference over all others is the aromatic fluid extract or elixir. This palatable method of giving the drug should be resorted to whenever it can possibly be procured and many patients who are in a neurasthenic and hysterical condition and have a horror for all medicines will offer little objection to this preparation.

The nerves of the alimentary canal during tea intoxication are in a torpid condition from over-excitation and the secretions of the glands have been very much reduced by the large amount of tannic acid in the tea infusion. No drug has yet been found which will so well restore the lost tone of the debilitated gut and increase the secretion and peristaltic action as cascara. The action of the drug on the bowel is not sudden, and in my hands, at least, the more sudden acting cathartics and laxatives have proved harmful. What is clearly indicated is a tonic laxative which will at the same time increase the action and secretion of the gastric, intestinal and biliary organs.

In cases of constipation of short duration the capsule above given is not used, but dependence is entirely on the cascara. It has been found eminently satisfactory. In those cases where the intoxication has extended over a number of years other medicinal agents must be added which will restore the lost bodily tone and correct functional perversion.

Treatment should not be stopped as soon as the patients feel better; in many cases it must be continued for several weeks. After the digestive troubles have been overcome and the system shows a tendency to establish an equipoise of health, a tonic pill is used for a considerable time. The constituents may be arranged to suit the advancement made. It is as follows:

℞

Sulphate of Strychnia	1 grain.
Hydrochlorate of Caffeine	
Extract of Damiana, of each	1 drachm.
Hydrochlorate of Cocaine	1 scruple.
Extract of Taraxacum	½ drachm.

Divide in twenty (20) pills of which one should be given twice daily.

This excellent formula was arranged and much used by Prof. W. H. Porter, of New York, with the most gratifying results as a stimulating restorative in all complaints which had associated with them loss of bodily tone. The caffeine and damiana are nutritive tonics of no mean ability to the cerebro-spinal centres and the motor nerves which supply the splenic arcade. The cocaine is only added in those cases where the hyperæsthesia of the solar plexus produces the sinking sensation in the pit of the stomach and which is much complained of. By this procedure permanent relief can be given to the truly deplorable condition of by no means a rare class of patients.

NOTE ON POSTURE IN LABOR.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics, L. I. College Hospital.

Read before the Brooklyn Gynæcological Society, February 2d, 1894.

In the last number of the *Archiv für Gynækologie* Wehle presents some interesting historical and critical observations on Walcher's posture and with special reference to its value in artificial delivery in narrow pelves. Walcher, in 1889, first called attention to the fact that in contracted pelves the length of the conjugate varies within narrow limits in different postures of the patient. He found that when the woman at term lay in the lithotomy position the diagonal and the true conjugate were shortened and that when placed in the dorsal posture with the hips at the edge of the table and the lower extremeties hanging, these diameters were lengthened. The latter position is known as Walcher's position. Klein confirmed the claims of Walcher by observations upon the cadaver and he showed that the variations in the length of the conjugate under changing postures were not confined to contracted pelves. Similar variations occur in normal pelves. The influence of posture is explained by the fact that the innominate bones are capable of rotation on a transverse axis drawn through the sacrum. The sacral promontory lies in a plane above the axis of rotation and in front it, and thus moves forward and backward according to the changing position of the body. This rotation of the innominate bones upon the sacrum has been mentioned by other authorities, especially by Ahlfeld in 1876, and by Meyer in 1878. Recently Wehle in his studies of the anatomical basis of symphyseotomy has called attention to the same thing.

With reference to the extent of mobility, Klein's results are not entirely in accord with those of Walcher. The latter found a gain from 8 to 13 mm. in the conjugata vera on changing from the lithotomy to the Walcher position, while Klein's experiment showed a gain of from 5 to 6 mm. only. His (Klein's) observations, however, were made upon the pelves of non-gravid women. The figures of Walcher are therefore to be taken as correctly representing the gain in space which is possible at the pelvic brim in the obstetric patient. Indeed, his results have been recently confirmed by Dührssen, who places the limits of variation for the true conjugate at from 5 to 12 mm. in the pregnant woman at term.

In several living subjects whom I have examined within two weeks after labor, I have found a gain under Walcher's position varying from ½ to ¾ cm.

In four non-puerperal pelves recently measured by me in the dissecting room of the Long Island College Hospital the gain was 4, 5, 6 and 4 mm. in the different cases respectively.

The result of three other observations which were kindly made for me by Dr. A. T. Bristow, the demonstrator, are given in the table below. The pelves were all *non-puerperal* and the measurements were made with extreme accuracy.

No. 1.

PROMONTORY TO MID-SYMPHYSIS.

At rest	$4^{7}/_{16}$	inches
Full flexion	$4^{5}/_{16}$	“
“ extension	$4^{7}/_{16}$	“

TIP OF SACRUM TO SUB PUBIC ARCH.

At rest	$4^{1}/_{2}$	“
Full flexion	$4^{3}/_{4}$	“
“ extension	$4^{5}/_{16}$	“

No. 2.

PROMONTORY TO MID-SYMPHYSIS.

At rest	$4^{7}/_{16}$	“
Full flexion	$4^{7}/_{16}$	“
“ extension	$4^{9}/_{16}$	“

TIP OF SACRUM TO SUB-PUBIC ARCH.

At rest	$4^{3}/_{4}$	“
Full flexion	$4^{7}/_{8}$	“
“ extension	$4^{3}/_{4}$	“

No. 3.

PROMONTORY TO MID-SYMPHYSIS.

At rest	4	“
Full flexion	4	“
“ extension	$4^{1}/_{8}$	“

TIP OF COCCYX TO SUB-PUBIC ARCH.

At rest	$3^{11}/_{16}$	“
Full flexion	$3^{14}/_{16}$	“
“ extension	$3^{9}/_{16}$	“

The chief object sought by Wehle in his paper is to emphasize the importance of the Walcher posture in operative delivery through narrow pelves. Ordinarily, for delivery by forceps or version, the patient is placed in the extreme lithotomy position. The effect of this posture is to make the conjugate even shorter than when the woman is at rest, while if delivery is begun with the limbs in a hanging position an average gain of nearly a centimeter is possible in all the lines running from the upper margin of the sacrum to the pubes. This is obviously a material advantage in facilitating the entrance of the head into the brim in moderate disproportion and may often be the means of sparing the patient the dangers of symphyseotomy; and in difficult forceps extraction or delivery by the breech, may save the child the serious intra-cranial injuries so common in such births.

But while the paper was addressed mainly to these exceptional cases, its teachings find an application in many simpler labors and even in ordinary births.

In ordinary labor the best posture during engagement from the standpoint of pelvic capacity alone is one of partial or complete extension.

When the head has reached the outlet of the pelvis the semi-recumbent or latero-prone position with the thighs well flexed is most favorable.

DISCUSSION.

Dr. Kortright: I certainly cannot add anything to the subject matter of the evening; personally I want to thank Dr. Jewett for his paper and express my gratitude to him for teaching me something I did not know before, this difference of the diameter of the pelvis by the posture during labor. I can recall half a dozen different women who might have been delivered with ease if the legs had been extended, thus gaining a centimeter in the diameter.

ALUMNOL.

In the College and Clinical Record, Prof. J. A. Cantrell, of the Philadelphia Polyclinic, gives a résumé of the therapeutics of Alumnol in dermatology, and his personal experience, having used it in his own practice in one hundred cases. He regards it as preferable to dermatol by reason of its solubility. He prescribed it in powder with starch ; as an ointment, with petrolatum, gr. xx.—ʒ i to ℥ i, and in solution, with water. The cases treated and the results are as follows : 1. Acute inflammatory affections ; (*a*) Eczema, 15 cases treated with the ointment, results satisfactory. (*b*) Erythema intertrigo, 3 cases, powder used, cured in 3 to 4 days. (*c*) Herpes Zoster, 2 cases, solution used ; result was that of a protective only, no curative effect. 2. Chronic inflammatory affections. (*a*) Eczema, 23 cases, ointment used, result satisfactory. (*b*) Non-syphilitic ulcers, powder used, cure in 3 to 4 weeks. (*c*) Sycosis non-parasitic, 1 case, ointment used, no curative result. 3. Syphilitic affections, 5 cases, powder and solution both used, no appreciable result. 4. Parasitic affections : (*a*) Scabies, 21 cases, all cured in 2 to 4 weeks. (*b*) Tinea circinata, 5 cases, cured with ointment. (*c*) Tinea versicolor, 2 cases, good results with ointment. (*d*) Impetigo contagiosa, 11 cases, all cured with ointment.

THE STATUS PRÆSENS OF THE ÆTIOLOGY OF CANCER.

BY J. M. VAN COTT, JR., M.D.,

Professor of Pathology at the Long Island College Hospital, and Director of the Department of Histology and Pathology of the Hoagland Laboratory, Brooklyn.

Read before the Brooklyn Pathological Society, Thursday evening, October 13, 1893.

In the last three years, and up to August this year, no less than eighty-seven theses have appeared in various languages treating exclusively of the ætiology of cancer. Various theories have been propounded in attempted solution of the problem, and as many claims made that the goal had been reached, and cancer stood amongst the pathologic occurrences in the human body for which a definite origin could be shown.

Since bacteriology has made such enormous strides, and since these organisms have been proven to be parasitic to man, and definite forms connected causatively with specific forms of disease, it is perfectly natural that attempts should have been made to determine some bacterial organism as the responsible factor in the production of cancer; but since the exhaustive work of Scheurlen *et al.* this effort has been abandoned, it being generally conceded that if an organism *be* at hand, in cancer, it is not a plant, but some lowly form of animal life.

There are three recent theories of the ætiology of cancer at present claiming particular attention throughout the scientific world, and each having its plausible side. One relates to indirect cell division, and is styled by its originator, Hansemann, "Asymmetric Cell Division In Cancer, And Its Biologic Significance."

The second, which has for its advocates such men as Podwyssozki, Sawtschenko, Soudakewiz, Sjöbring, Pfoa, Ruffer, Russell, Pfeiffer, *et al.*, supposes that an intracellular, or intranucclear parasite—according to some a coccidium, to others a psorosperm, and still others a gregarina—infests the tissues, and through its presence induces a lawless growth of epithelial and connective tissue elements.

The third supposes that cancer is parasitic, that the parasites are animals, but that no epithelial elements exist in these neoplasms at all, the polymorphous bodies found in the growth being in reality not epithelial cells, but the parasites themselves, and that these parasites produce a toxic substance—cancroin—which is responsible for the so-called cachexia (Adamkiewicz).

Such widely different ideas are evidence enough of our lack of definite knowledge on the subject, and the difficulties at hand.

And yet on careful analysis of the three hypotheses, there are many points in each which may be made to harmonize, and which are in keeping with the clinical facts at hand.

Bacteriologic research has taught us much regarding parasitic affections, aside from the special action of specific forms of germs. It has thus been pretty clearly shown (1) that what is called "normal resistance" inheres in the tissues of healthy individuals, which prevents parasitism. Much light also has been thrown upon the relation of (2) heredity to parasitic disease. It has further been shown that (3) location has important bearing upon parasitic infection, some points being far more vulnerable than others. In the same way (4) trauma is definitely proven to bear direct relation to the entrance of parasites into the tissues. And in this connection it has been very abundantly shown that parasites are prone to focus at points where a (5) locus minoris resistentiæ has been established (in the tissues). Finally (6), contagion has been settled, as a fact, in diseases of known bacterial origin. So that these various conditions — normal resistance, heredity, location, trauma, the locus minoris resistentiæ and contagion—may be regarded, in the light of bacteriology, as directly associated with many parasitic affections in greater or less degree; and if they can be shown to be so related to cancer, this too should be regarded a priori as probably of parasite origin.

One other fact connected with cancerous development should be considered, *i.e.*, that primary foci always originate in epithelial tissue, showing the purely local origin of the disease—the tumor belongs originally to the homologous growths.

1. The experiments of Waterhouse and others go to show that, so long as the healthy tissues have not been devitalized, they have the capacity to resist the action of pyogenic and other germs to an astonishing extent; but that when the tissues become damaged so as to show a lessened resistance, they are readily seized upon by these organisms, which may then grow and produce their most deadly effect.

2. No one knows just what heredity is, more than that it seems to be a transmitted susceptibility to the development of disease; and bacteriology has positively shown that, even when an individual is born with a certain disease, it is only hereditary in that the offspring is capable of supporting the parasite which is its real cause. It is hard to fix an accurate standard of normal resistance, but this does not prevent the recognition of a reduced resistance, and it is this *reduced resistance* which is hereditary in many instances.

How far these facts can be applied to the growth of cancer is a very pertinent question; because, if it can be shown that they do in any important measure apply to these neoplasms, it would be difficult to avoid the conclusion that the disease is parasitic.

1. That there is a normal resistance to the growth of cancer in tissues is shown by the fact, that repeated efforts to transplant the cancer tissue into healthy individuals have failed, while auto-inoculations have been successfully made.

2. There can be no question as to the inherited tendency of some individuals to contract cancer; this has been distinctly proven for a long time. Stomach 14 %, liver 15-20 %. Whole families seem to be capable of harboring the process for successive generations. It is equally certain that, just as in tuberculosis, persons may acquire cancer in whom can be traced no hereditary taint whatever.—*vide* McFarland's essay.

3. As to location as a factor in cancerous processes there seems to be a good deal to show that it does bear close connection with its origin. It is a significant fact, that primary cancer has not been known to develop in places where there is not contact with the external air ; and Andrews has amongst others studied the locations of 7,881 primary carcinomata, as illustrating the probability of a cancerous microbe.

In any event, cancer is prone to originate at points in the body which are constantly subjected to contact with various foreign substances oftener than at any others.

4. There would seem to be a close relationship between this fact of location and trauma. Abundant proof has been derived from clinical observation, that trauma is often associated as the exciting cause of cancer; and regarding as trauma any mechanical injury to the tissues independent of its degree, it is easy to see how this might operate to enable the occurrence of this disease through the establishment of the locus minoris resistentiæ.

Rudolph Volkman has collected 128 cases of cancer developing from scars, ulcers or fistulæ of the extremities. At least six writers have claimed by title of their papers directly that cancer is contagious and infectious, and there seems to exist a close relationship between trauma and tumor development, as evidenced by such an occurrence as the development of epithelioma upon the penis of a man whose wife was suffering with similar disease of the cervix uteri.

Clinical histories are perfectly familiar to those who have been on the alert to find them, where it would be exceedingly difficult not to regard cancer as contagious.

It is also significant that primary cancer is homologous to a tissue always found in exposed portions of the body, and whose ultimate elements are regarded by cytologists as to an extent, and from the relative standpoint, wanting in resistance; a fact supposed by them to be due to their high state of differentiation.

Reasoning by analogy, there are strong proofs of a general nature in favor of a parasitic origin for cancer; for it has been distinctly shown above, that the same facts which have been determined regarding the parasitic nature of the bacteria—*i.e.*, normal resistance, heredity, location, trauma, the locus minoris resistentiæ, contagion—are all definitely related to the development of the disease known as cancer.

Furthermore, the progress of cancer is very suggestive of a parasite in its resemblance to the progress of other infectious organisms; the tendency to form colonies or foci, and to traverse the path of the lymphatics are exceedingly interesting. Such considerations as these are ample warrant for the eager search, at present in progress the world over, for an organism which shall stand the test of Koch's law of the pathogenesis of germs, and be competent to produce cancer under proper circumstances at will. In this hunt for spoil we labor under the one great disadvantage that no one has succeeded as yet in inoculating the lower animals successfully with cancerous material. There is an exception to this: Hanau has succeeded in getting carcinoma to grow in rats.

Success in this line would very soon put us in position to progress more rapidly in the quest.

In considering the general questions involved in the parasitic theory of cancer, it must not be forgotten that there are those who are bitterly opposed to the idea, and who claim for the various appearances in cells which have been denominated as parasites, that they are really the results of pathologic degenerations of the cells. To establish this claim it must be clearly shown that the intracellular inclusions behave in a manner towards reagents similar to known forms of degeneration; it is obviously just as unfair to claim a degeneration, the nature of which is entirely obscure, as to claim for some adventitious form in a cell that it is an animal, without giving at least a plausible reason for it.

Lukjanow has made it clear in his classic work on the "Elements Of A General Pathology Of The Cells," that degenerative processes in the cells are susceptible of classification, and insists that visible degenerations should respond to known micro-chemic reagents.

As an example of what is meant here, Russell's eosin bodies should be made the subject of most careful analysis, before any definite stand can be properly taken concerning their true nature. The fact of the matter is that we do not certainly know that parasites cannot exist in cells without causing them much harm, and, indeed, for an indefinite period.

A.— Hansemann's theory of "Asymmetric Karyokinesis" is based upon present knowledge regarding the indirect division of cells.

Flemming, Rabl, Carnoy, and others have shown that under normal circumstances karyokinesis progresses through a series of five phases, the first two of these are called "prophases," the last two, "anaphases," the third, middle or "metaphase." These phases consist of changes in the arrangement of the chromatin fibrils with regard to each other and their relation to the achromatin. First comes the mother-skein or spiral, second the mother-star or aster, third the equatorial plate (metakinesis), fourth the double star or dyaster, fifth the double skein or spiral.

During these phases the achromatin fibrils vary in shape and relation, and the protoplasm of the cell is seen to contain exceedingly complicated structures, such as peculiar polar bodies, and attraction spheres. During this process the nucleus has become divided in two, and finally the cell itself, with the result of two independent elements.

These phenomena have been utilized by pathologists to determine the progress of growth of tumors; rapidity of growth being found in correspondence with the number and variety of karyokinetic figures.

Arnold, Martin, *et al.* have further shown that under pathologic conditions a nucleus may undergo indirect division into three, four, or more daughter-nuclei, indirect fragmentation.

Finally Hansemann has shown that many cancers contain cells in which asymmetric nuclear division into unequal daughter-nuclei has occurred through the karyokinetic process. He declares that these daughter nuclei differ materially not only in size, but also in the number of chromatin segments they contain. He further supposes these nuclei with the resulting cells to still possess the property of reproduction, but denies to them their normal function. The larger of these unequal cells he supposes to be transformed into the cancer cells, with resting nuclei.

In support of his view that, through the unequal indirect cell division the function of the cell is lost, Hansemann refers to the works of V. Beneden, Weissmann and others, which originate the theory of panmerismus, "which says that the biologic properties of a cell are bound up in definite formed elements of the cell, which elements originate from more than one molecule, and which through growth and division transmit the biologic properties of the parent cell to the daughter cells."

Nägeli and Weissman call this substance idioplasma, Hugo de Vries, pangene.

These larger cells, according to the author of this very able article, having lost in the course of asymmetric karyokinesis portions of idioplasma, have lost also their balance and become according to him "anaplastic," *i.e.* from cells of high differentiation they become cells of lower development ; and for this very reason he regards it impossible that the cells of cancer should be embryonic; because an embryonic cell must a priori contain all the potentialities requisite to higher differentiation. His experiments with the embryonic cells of rabbits, the results of which tend to support this view, are exceedingly ingenious.

The weak point in Hansemann's theory, or better, what it lacks, is any conception of the cause which underlies the asymmetric process. He shows plainly that it is present in all of the cancers, and in none of the benign growths and tissues he examined ; but as to just what has occasioned this deviation from normal karyokinesis is not even hinted at in his paper. One statement only might be regarded as suggestive, *i.e.* the view of Klebs, that the entrance of leucocytes into epithelial cells resulted in a fertilization of the epithelial cell and increase of chromatin.

As Lukjanow says, pathologic processes are often accompanied with increased, and sometimes abnormal karyomitosis; but we are yet in the dark as to the exact relation between the two.

The prime point in the theory of Hansemann is his determination of the fact that asymmetric karyokinesis is constant in cancer; and his conclusion that the altered chromation is cause sufficient for the production of unbalanced cells is logical.

From our standpoint there is nothing in the theory which forbids the idea of a parasite for cancer; on the contrary it may very well be that the asymmetry in the chromatin is a result of the untoward influence of either an intracellular or intranuclear organism.

It would fill a book to discuss all the merits and demerits of the various species of parasites supposed to be specific for cancer. nor does the writer of this paper feel at all competent to do so intelligently, and he is not alone in this: for no less a one than Mallassez has well said, that extreme caution is to be observed in classifying these lowly forms which are found to infest the cells, because not anybody understands much about them. The thought occurs, however, that no one animal form is necessarily the specific cause of this disease. Analogy would seem to bear this out: *e.g.* pus was at one time supposed to be caused by one germ, now it is known that at least six organisms can produce suppuration; my friend Dr. Bristow, of St. Mary's Hospital, Brooklyn, has recently had a series of hospital cases of traumatic suppuration, where b. pyocaneus, and b. coli communis were found in pure culture.

As to just what the relationship between the parasites and asymmetric karyokinesis may be is not entirely clear. Lukjanow says in a general way that disease processes are some of them evidently the cause of increased karyomitosis, and following Arnold and others makes an effort to classify the chief varieties of indirect segmentation occurring in pathologic processes.

Reasoning from Hansemann's standpoint two views might be held. The first of these would depend upon the capacity of the parasites to either destroy absolutely some of the chromatin segments, or by virtue of their mere presence so modify their potential energy, as to inhibit the normal karyokinetic cycle, with the result of cells such as Hansemann describes, which are only partially differentiated, but which, having descended from highly differentiated cells by an inverse process of retrogression, have at once gained in virility and lost in balance and function. Having once reached the lower plane, and the power of regeneration lost, it is not hard to conceive a lawless development of cell elements such as is characteristic of cancer.

The other view is suggested by the theory of Klebs, of the fructification of the epithelial cells by leucocytes. Klebs believes that leucocytes may gain entrance to the cell, and that the latter may sustain an increase of chromatin by driving it from the former.

Arnold, in an article in Virch. Archiv. as late as last June has shown that the white blood corpuscles have astonishing energy and great constructive power. His experiments were conducted with sterilized elderberry plates, and similarly prepared glass tubules which were introduced under antiseptic precautions, either into the lymph-sac or peritoneal cavity of frogs.

Summing up his conclusions he says: "In all experiments mono-, tri- and multinuclear, also polymorphous cells were found at a time when the participation of the fixed tissues, *i.e.* the histogenetic migratory corpuscles, was excluded, which therefore (the cells) could only be of hæmatogenous origin."

"While some cells disintegrated, others transformed themselves into epithelioid, giant, spindle, and branched cells, at a time when they could only be regarded as hæmatogenous migratory corpuscles, throughout the entire series of experiments."

Recognizing two facts—first, the power of foreign bodies (in Arnold's exp. elder pith plates and tubes) to stimulate or mobilize the white blood corpuscles, and second, the remarkable potential energy of the white cells when excited—it is only necessary to attribute to the possible cancer parasite a rôle similar to that of the other foreign bodies, and adopt the view of Klebs that these white cells fructify the epithelia, to form a reasonable theory as to the exact origin of the polyhedral cells in cancer, and the relation of the parasites to the process. Could such a hypothesis be proven, it would immediately explain the relatively few parasites to the number of cancer cells—a fact which is in strong contrast to bacterial parasitismus.

The weak point in the theory is two-fold: no one has ever actually observed the phenomenon of the transmission of chromatin substance from a white corpuscle to an epithelial cell, and such an idea would seem to be inhibited by the theories of Minot, Weissman and others of the hermaphroditism of cells.

For a cell to be fertilized it must, according to these theories, at least in the ova of non-parthenogenetic individuals, first lose the male portion of its chromatin, and second acquire the male portion of chromatin from a genetically entirely different individual.

Assuming *prima facie* the soundness of these theories, it is difficult to conceive of a productive fusion between the cells of the same individual, no matter how different they may be from a differential standpoint.

Such a train of thought leads naturally up to another, which is also suggested by the third claim mentioned at the outset in this paper, *i.e.* the theory of Adamkiewicz, that what we have always regarded as epithelial elements in cancer are really the true parasites themselves.

A—— draws attention to the facts that the cells of cancer have no "kitt substance," that they produce a very toxic substance, "cancroin," and further that they have power of motion resembling that of the amœba, facts which are at direct variance with the normal behavior of epithelial cells.

There is some plausibility in these conclusions, but they lack what must always be the crucial test—and which it would certainly seem should have been possible to such large and abundant parasites—they have not been cultivated.

Taking the hint of fructification from Klebs, and admitting the points in dissimilarity between cancer cells and epithelia, it is not entirely unreasonable to suppose that the elements of cancer are in reality the offspring of an accidental conjugation between parasites and epithelial cells.

In any event, the peculiar features ascribed to the cancer cells by A—— form very tempting arguments in favor of such a conclusion ; for they preserve not only (at least to an extent) the motion inherent in the lowly forms of animal life, but also the secretion of epithelial cells, or better secretion in a modified form, and rob them of their cement substance.

In such a view are crystallized all the others—asymmetric karyokinesis, parasitismus, fructification, and that which holds the cancer cells to be the parasites ; besides explaining at once the lawless and vicious growth of the cellular elements of cancer, and many other points of doubt, and at the same time conforming exactly with the laws—so far as we know them—which govern the successful and abiding infection of the higher animals with parasites.

It is only necessary to suppose the presence in the tissues of an animal parasite, and with it, through trauma or otherwise at the point where the parasite lies, a "locus minoris resistentiæ," to make it conceivable that in the struggle between parasite and epithelial cell for the survival of the fittest they should synchronously lose complimentary, *i.e.* male and female, portions of their chromatin, and finally wind up the contest by fusion and by such mutual agreement to live in harmony together, produce discord of grave moment to the unfortunate individual who has been the unwitting party to the conflict.

Weissmann's "Vererbungs Theorie" agrees entirely with such a view of the growth of cancer, especially as it explains the hereditary tendency manifest in some individuals to develop cancer, through greater susceptibility to parasitic invasion.

The real weak point here lies in the law of the "preservation of species"; whether it is possible for a coccidium, or a psorosperm, or a gregarina to conjugate with the differentiated cells of so highly complex an animal as man, is a question that should be relegated for answer to men whose work and training fit them to consider the matter from a judicial standpoint. It must be remembered, however, that, as Hansemann himself remarks, there is vast difference in the potentiality of an epithelial cell, and that of the original ovum which gave to this highly differentiated cell its existence; so that, unless it can be clearly shown that some actual difference in the essential quality of life in the two—rendering their conjugation impossible—is at hand, there may not be so great a difference in the resistance between parasite and cell as to prohibit their union with a resultant hybrid offspring.

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(*With Special Reference to the Parasite Theory.*)

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DIABETES MELLITUS:

AN ANALYTIC STUDY OF A CASE IN THE MEDICAL WARDS OF THE LONG ISLAND COLLEGE HOSPITAL, WITH REMARKS ON THE DISEASE.

BY ARTHUR CLARENCE JACOBSON, M. D.

This patient was admitted to the dispensary service of Dr. Gunther in November, 1892. She first came under my observation on November 6, 1893. Tracing her subjective history, which covers a period of five years, I am enabled to present the following résumé of the case, from the beginning of her present trouble up to the time of her admission into the hospital on Nov. 13, together with the hospital record:

Name, Mrs. A. B.; age, sixty-four years; color, white; nativity, United States; occupation, housewife; residence, Bayville, L. I.; habits, good; temperament, neurotic; previous health, pre-carious; present condition, neurasthenia, glycosuria; admitted, Nov. 13, 1893; ward, female medical; diagnosis, diabetes mellitus; treatment, anti-diabetic diet; bromide of arsenic, gr. $^1/_{40}$ t. i. d.; palliative; service, Dr. McCorkle, Dr. Wakeman; discharged Nov. 22, 1893; unimproved.

Dating from 1889, the patient suffered from a series of indefinite ailments up to three years ago, when her present symptoms became well developed. She then noticed that she was passing an increased amount of urine and that micturition was much more frequent than normal. The urine at this time was light-colored, and emitted a sweetish odor. She began to lose flesh, although her appetite and thirst were much increased. At times her mouth was so dry that deglutition was difficult. In the way of cutaneous manifestations, some years ago she had a furuncle on the left cheek, and pruritus pudendi, as well as general itching, has occasioned more or less discomfort and inconvenience during the past three years. Œdema of the lower limbs is stated to have been a marked feature about a year prior to her admission into the hospital. She has suffered from general weakness, this being especially marked in the arms. She has always been very nervous, and has had neuralgic pains in the lower limbs since the development of the diabetes (bilateral sciatica). A sweetish taste in the mouth has been noted by the patient for some time past.

In regard to hereditary history, the patient's mother died of Asiatic cholera and her father of "some fever." They were both middle-aged at the time of their decease. She states that her mother was very nervous and irritable.

I visited the patient on Nov. 15, and pursuing a course of subjective and objective examination along the line of each anatomical system, I elicited the following additional history and physical signs:

GENERAL CLINICAL COURSE AND PHENOMENA.

In keeping with the usual mode of invasion, the approach of the disease from which my patient is now suffering was insidious, various minor ailments having engrossed her attention for two years prior to the complete development of the disease. She states that she weighed 165 lbs. three years ago, since which time her weight has progressively lessened. She has had much domestic trouble. Languor and debility are now marked features. The limbs are very weak and the gait staggering, the patient being obliged to steady herself by grasping some support. Co-ordination, however, is good. The staggering is also partly dependent upon vertigo, of which she complains. The temperature is slightly above normal, the elevation fluctuating between 99 and 100°F. The patient had malaria of the quotidian type four years ago. She passed the menopause in 1873, when 44 years of age.

Symptoms referable to the digestive organs: Polydipsia was the first symptom remarked by the patient. It became a source of great discomfort, obliging her to drink at short intervals, and to rise frequently during the night. She imbibed on an average one gallon of water daily. At present, thirst is not abnormally increased, and it may here be said that the quantity of urine is normal (diabetes decipiens), which implies an interdependence between the polydipsia and the polyuria, in accordance with the views of Strümpell.

Of gastric symptoms nausea has been and is a marked feature. Earlier in the clinical course of this case vomiting was an occasional symptom. The patient's appetite is excellent, which is significant, considering her general state of innutrition, but is not of a degree which would warrant the denomination bulimia. She has a craving for sweets and starchy foods, and is fond of pastry and cake. A sweetish taste is constantly present in the mouth, and her breath exhales a fruity odor (acetone). The salivary secretion is acid, the reaction being well marked (Strümpell states this to be invariable). The tongue is dry, red and flabby, not coated, and slightly indented on the edges. The gums are spongy, tender, and bleed easily. The last-named condition made its appearance two years ago Constipation is marked and obstinate, the passages being clayey and dry. Bleeding and protruding hæmorrhoids are present.

Symptoms referable to the respiratory organs: I find the respiratory organs unimpaired, inspection, palpation, percussion and auscultation being negative. Thus tuberculosis, which is stated to complicate 50% of all cases, is excluded. A point in the history is the occurrence, three years ago, of croupous pneumonia, which is a frequent complication of diabetes mellitus. Shortness of breath on slight exertion is well marked. On Nov. 15, the number of respirations was twenty-two per minute, fluctuating on succeeding days from twenty to twenty-five.

Symptoms referabte to the Circulatory System.—The circulatory apparatus presents no special lesions. The pulse varies from sixty-eight to eighty-eight and is weak, intermittent, and compressible. No arterial sclerosis. No cyanosis of lips or fingers. I find slight cardiac weakness, the first sound possessing but little of the "booming" quality. The pulmonary second sound is accentuated. No hæmic murmurs. Areas of superficial and deep cardiac dulness normal. Apex beat *in situ.*

Cutaneous affections.—Skin remarkably dry and rough. There is pruritus pudendi—not marked, however—as well as general itching. The skin of the forearms is eczematous and the face presents an erythema. Eczema of the face is stated to have been a marked feature until recently. The itching appeared three years ago. About nine years ago the patient had a boil on the left cheek, but none has since appeared. A short time subsequent to the development of the diabetes she suffered from a succession of severe hordeola, which affected particularly the lids of the right eye. She states that prior, and for some time subsequent to the development of her present affection, she was much troubled by excessive perspiration. There is now slight œdema of the subcutaneous areolar tissue of the lower limbs and also varicose veins. The skin is fairly elastic for a woman of her age (64.) There is atrophy of the finger nails. No jaundice.

The Nervous System.—There is a moderate disturbance of the whole nervous system, as indicated by headache, physical and mental hebetude, and depression of spirits. Bilateral sciatica and occipital neuralgia are pronounced symptoms. Cutaneous anæsthesia of the dorsal surfaces of the forearms and of the back, as indicated by the æsthesiometer, is well marked, and I find that in other cutaneous areas there is more or less retardation of the transmission of sensory impulses to the sensorium. The patella tendon reflex is abolished on the left side and markedly diminished on the right (Bouchard's symptom). There is loss of power in the extensors of the feet, particularly of the right foot. No wrist drop.

The patient complains of dull pain along the whole length of the spine. There is increased sensitiveness of the vertebræ on pressure, limited to definite spots, being well marked in the upper dorsal region and of an intense character in the lumbar region. Sacral neuralgia is a prominent symptom. Pain in the left inguinal region was more or less constant prior to the administration of a cathartic on Nov. 20. The patient complains much of paræsthetic sensations, such as numbness, formication, etc., particularly in the hands and feet.

The Blood.—I have obtained the brown coloration of glycogen-containing leucocytes and free granules of this substance, the intra-cellular presence of which has been described by Salomon, Frerichs and Gabritschewsky. I employed the coloration test described by v. Jaksh in his "Klinische Diagnostik." He states that in health the blood examined after meals exhibits little or no increase of glycogen. In diabetes mellitus the glycogen reaction is very marked. This I have verified.

I have found no special change in the red or white corpuscles. The blood count reveals approximately 4,300,000, instead of the normal 4,500,000 to 5,000,000 red blood corpuscles to the cubic millimeter. In other words, my patient is slightly anæmic, though no evidence is given of it by the conjunctivæ, nor are there any hæmic murmurs; however, as stated under "Respiratory Organs," she suffers from shortness of breath on slight exertion, and further confirmation of her anæmic condition is to be found in the ophthalmoscopic appearances (see "Vision").

Abdomen.—I examined the abdomen on Nov. 13. Inspection revealed nothing. On palpation, however, I found large, doughy tumors at the hepatic and splenic flexures of the colon, which I took to be masses of accumulated fæces, a finding which was subsequently confirmed by their subsidence after the administration of a cathartic and enema on the morning of Nov. 20.

The Liver.—There are no physical evidences of hepatic enlargement, it being impossible to palpate the liver along the borders of the ribs; and furthermore, in the median line I find the vertical liver dulness slightly below the base of the xiphoid, in the mammary and parasternal lines at the sixth rib, and in the axillary line at the eighth rib—normal in every respect. There are, however, subjective symptoms of hepatic hyperæmia, such as a feeling of weight and fulness and more or less dull pain in the right hypochondrium. There is no tenderness over the gall bladder, nor is there any jaundice.

In view of the facts considered, I am led to the conclusion that if hyperæmia or enlargement exist, they are not of a degree sufficient to induce appreciable morbid phenomena. The subjective symptoms of fullness, weight, and dull pain I consider unreliable, since they are not confirmed by physical examination, and furthermore, my patient is decidedly neurotic and inclined to magnify her ailments. They are also to be explained on the ground of the fæcal accumulation, which would occasion the same subjective symptoms.

Vision.—The field of vision, as determined by the perimeter (Nov. 23), presents relative scotoma for yellow and white, the latter being taken for light brown, the former for dark brown. The left optic disc is pale. The right fundus is altered in appearance by hyperæmia, the visible changes being limited to the central vascular region. The vessels are large and tortuous. The right optic disc partakes of the general hyperæmia.

Further evidence of general congestion of the right eye is given by the deep injection of the right conjunctiva, this eye being also more or less constantly suffused (lacrymation).

There is also marked curtailment of the range or amplitude of accommodation. This, however, may be considered physiological in one sense (senile change), the presbyopia being also dependent upon certain pathological changes in the ciliary muscle or its motor nerves.

There are exudative inflammatory changes in the right fundus, small, irregular, dingy-white spots of degeneration being found. The appearances of the fundus, however, are not entirely characteristic of the diabetic eye. These changes resemble closely those produced by albuminuric retinitis, except that there is no tendency toward a concentric or stellate arrangement around the macula lutea, as in the latter condition. No exudations appreciable in the left fundus, though Gowers states that both eyes are commonly affected in diabetes.

Muscæ volitantes are more or less constantly observed by the patient, but are not a source of much annoyance.

The Urine.—The following table of analyses represents the composition and character of the renal excretion during the patient's residence in the hospital, as well as upon the dates when she was presented at the college and dispensary clinics.

	Color.	Reaction.	Odor.	SP. Gr.	Q. in 24 Hrs.	Albumen.	Sugar, Grs. to Oz.	Urea, Grs. in 24 Hrs.	Phosphates.	Sulphates.	Chlorides.	Organic Constituents.
Nov. 6	Light Yellow.	Acid.	Fruity	1032.	....	None.	xix	....	Ab'nd'nt	N'rm'l	N'rm'l	Torula Cerevisiæ; A few Degenerated Epithelial Cells: no Casts.
" 13	"	"	"	1038.	....	"	xxv	....	Normal.	"	"	
" 15	"	"	"	1041.	xl. ozs.	"	xxviii	310.	Ab'nd'nt	"	"	
" 16	"	"	"	1037.	"	"	xxvii	409.2	Normal.	"	"	
" 17	"	"	"	1048.	"	"	xxxii	465.	"	"	"	
" 18	"	"	"	1040.	xlii. ozs.	"	xxix¾	283.185	Ab'nd'nt	"	"	
" 19	"	"	"	1035.	xxixss. "	"	xxi	343.4025	Normal.	"	"	
" 20	"	"	"	1045.	xxxviii. "	"	xxx	388.75	"	"	"	
" 21	"	"	"	1047.	xxix. "	"	xxxi	337.125	"	"	"	

My tests for acetone have been rather unsatisfactory. I obtained the Burgundy-red reaction on the addition of a solution of the chloride of iron (Gerhard). This is not a reliable test, since it also precipitates the salts of formic and acetic acids ; also carbolic and salicylic acids ; decomposition products of antipyrin, kairin, and thallin. Diacetic acid also responds to the various tests of acetone (Tyson).

Gerhardt supposed that this reaction was due to some acetone-forming substance, probably ethyl diacetate or diacetic ether, which on decomposition yields equal molecules of acetone and alcohol ; thus :

$$C_4H_5O_3C_2H_5 + H_2O = C_3H_6O + CO_2 + C_2H_6O$$

Ethyl diacetate. Water. Acetone. Alcohol.

Deichmüller and Tollens, however, believe that the substance is derived from aceto-acetic acid.

Ralfe's modification of Lieben's iodoform test gave better results. I obtained the yellow contact ring and a slight precipitate. Lactic acid is the only other substance likely to be met in the urine which will produce the iodoform reaction.

Gerhardt's reaction I was able to obtain on several occasions, but the iodoform test responded but once, on November 17th ; however, since the chloride of iron test precipitates so many other substances besides acetone, I believe the iodoform test to be the more reliable.

Acid fermentation and turbidity rapidly occurred in all the specimens examined, the latter being due the development of the torula cerevisiæ, which I found in enormous quantities in the urine.

It is said that the phosphates are usually in excess. In this case, the analyses found them normal, except on November 6th, 15th, and 18th respectively. On these dates they were markedly increased, as per table. In looking over the literature of the subject, I find no reason ascribed for their increase, but it may be assumed that it is the result of excessive nervous metabolism.

Tyson places the average normal amount of urea excreted daily at from 20 to 40 grammes (308.6 to 617.2 grs.), the quantity fluctuating with changes in the quantity and composition of ingesta, and with the rapidity of tissue metamorphosis in health and disease. It is stated that in diabetes the daily excretion of urea is generally markedly increased. The average daily amount of urea excreted in the case under consideration is much below the maximum physiological limit allowed by Tyson, but taking into consideration the sex of the patient, also her slight frame, and the fact that during these urinary analyses she was a hospital patient taking absolutely no exercise, tissue metamorphosis thus being reduced to a minimum, we may say that the urea is *relatively* increased.

Regarding the excretion of glucose, there is rather more being eliminated than is commonly observed, Flint stating that the proportion of sugar in the urine is usually from two to four per cent. My patient is excreting an average of five and one-half per cent., but there are cases on record in which as high as fifteen per cent. has been passed daily. Hospital diet and medication have failed to exercise an inhibitory effect upon the amount excreted, a fact which furnishes an unfavorable element of the prognosis (q. v.)

It is stated that emotional excitement will increase the amount of sugar excreted. This I was able to verify on November 17th. My patient is an extremely nervous woman, and was excessively annoyed while in the hospital by the sufferings of a broncho-pneumonia patient who occupied the bed immediately adjacent to her own. On the afternoon of the seventeenth this patient died, the death agony being prolonged and painful to witness. I visited my patient in the evening and found her in a state of nervous erethism bordering on hysteria. My analysis for this day (see table) showed a larger amount of sugar than had been excreted on any other day while the patient was under my observation. I record this simply as a matter of interest.

Intercurrent febrile diseases are said to diminish the elimination of sugar. My patient states that after her attack of croupous pneumonia in 1890 she enjoyed comparatively good health for a considerable period. An analysis at this time would probably have revealed a diminution in the amount of sugar. It is a fact that the excretion of sugar, during an intercurrent acute febrile disease, may entirely cease, as was first pointed out by R. V. Engel, in a contribution from v. Jaksch's clinic.

Ammonia, according to Stadelmann, is present in large quantity in diabetic urine, but it is neutralized and the urine remains acid in consequence of the beta-oxy-butyric acid which it contains (Minkowski). These facts I have not been able to verify. Researches of Stadelmann and others point to beta-oxy-butyric acid as the toxic agent in diabetic coma. It yields diacetic acid on oxidation, and this breaks up into CO_2 and acetone. It is an intermediate product between sugar and acetone.

In general, the findings may be said to conform to the description of the composition and character of diabetic urine as given by the best authorities.

Diagnosis.—I consider my case to be a true instance of the rare form of diabetes mellitus first described and named by P. Frank, though known before to Cowley, namely, diabetes decipiens, which consists in a temporary decrease of the watery constituents of the urine, without a corresponding diminution of the excretion of sugar—a remarkable deviation from the ordinary features of diabetes. I find that the daily excretion of urine, during the interval between November 13th and 22d, averaged 36.93 ounces, which, according to Bartley, is nearly fourteen ounces below the average normal standard. The sugar, however, averaged 26.97 grains to the ounce (over 5½ per cent.) during the same interval. Hence, I am warranted in making the above diagnosis, provided that no error in the collection and measuring of the urine has been made. I am confident that my urinary report is accurate, as I had the co-operation of an intelligent patient and a painstaking nurse; furthermore, the fact that thirst is not unnaturally increased at present goes far toward confirming the diagnosis.

There are other aspects of this case which would tend to obscure a diagnosis of diabetes mellitus, in addition to the one above discussed. My patient is a female and was attacked by her present disease when fifty-nine years of age (five years ago). Females form a relatively small proportion of those attacked. Dickinson states that in England and Wales 4,273 men died of diabetes from 1861 to 1870, while during the same period of time but 2,223 women succumbed to it. Of Griesinger's 217 cases, 165 were in men and 52 in women; of Seegen's 140 patients, 100 were men and 40 women; of R. Schmitz's 104 patients, 77 were men and 27 women; of Ziemmer's 62 patients, 49 were men and 13 women; Betz counted 24 men and 7 women; Leudet, 24 men and 17 women; Andral, 52 men and 32 women; J. Mayer, 61 men and 13 women. Tyson has never met a case of diabetes in a female during his entire hospital practice.

Regarding age, Senator states that it rarely occurs after sixty-five. Of course patients may die of it long after this age, but the initial symptoms of the disease usually manifest themselves between the ages of twenty and fifty-five, according to the authorities given below. The last-named authority (Senator) observed a case which developed in the sixty-ninth year (male). Dickinson gives a case in which the disease was first developed in the seventy-first year.

	Griesinger.				Seegen.		Schmitz.		Andral.		Mayer.			
	Males.		Females.											
		P. Ct.		P. Ct.		P. Ct.		P. Ct.		P. Ct.		P. Ct.		P. Ct.
Up to 10 years.	2	1.8	3	5.8	0	......	1	0.96	2	2.4	0	......	0	......
" " 10–20 "	22	13.3	14	26.9	5	3.6	8	7.7	3	3.6	1	1.6	1	7.7
" " 20–30 "	42	25.5	14	26.9	23	16.4	9	8.6	12	14.3	3	5.0	0	......
" " 30–40 "	49	29.7	11	21.1	21	15.0	16	15.4	20	23.7	8	13.1	2	15.4
" " 40–50 "	31	18.8	5	9.6	33	23.6	16	15.4	20	23.7	22	36.1	4	30.8
" " 50–60 "	11	6.7	3	5.8	43	30.7	38	36.5	13	15.5	19	31.1	3	23.1
" " 60–70 "	5	3.0	2	3.8	14	10.0	12	11.5	12	14.3	6	9.8	3	23.1
" " 70–80 "	2	1.2	0	......	1	0.7	4	3.8	2	2.4	2	3.3	0	......
	165		52		140		104		84		61		13	

Dickinson.				
	Males.		Females.	
		Per Cent.		Per Cent.
Up to the 5th Year.	41	0.96	33	1.5
" " " 10th "	62	1.5	52	2.3
" " " 15th "	113	2.7	87	3.9
" " " 20th "	221	5.2	131	5.9
" " " 25th "	222	5.2	141	6.3
" " " 35th "	651	15.2	368	16.6
" " " 45th "	653	15.2	384	17.3
" " " 55th "	746	17.5	352	15.8
" " " 65th "	817	19.1	377	16.9
" " " 75th "	594	13.9	236	10.6
" " " 85th "	146	8.4	55	2.5
" " " 95th "	7	0.16	7	0.3
	4,273		2,223	

These tables show the occurrence of the disease in the different periods of life. In Griesinger's table the time of the first appearance is meant, while in Dickinson's table the age at death is given. The other observers have recorded the patients' ages at the time of their first coming under observation.

Thus we see that the case under consideration presents certain unusual and interesting deviations from the general rule. My patient's present illness developed several years later than the limit usually set (about fifty-five years); also, the female sex enjoy comparative immunity, hence it is interesting to note that the patient is a female. Aside from these departures from the rule, the clinical course of this case has been typical, and further diagnostic confirmation is to be found in the presence of an excess of glycogen in the blood, the coloration reaction, as stated under "The Blood," being well marked.

In regard to the liver, I have found no evidences of cirrhosis, hypertrophic or atrophic. According to v. Jaksch, the association of diabetes mellitus and cirrhosis hepatis is extremely uncommon. Palma is of the opinion "that the association of diabetes mellitus and cirrhosis in a given case can only be considered as a coincidence and of no further significance, and that there is no justification for the designation of 'bronze diabetes,' sometimes employed." Ziemssen states that the complication of diabetes mellitus occurring in the course of cirrhosis appears to be extremely rare. Budd reports one case, and Leudet observed in one instance, during the first stage of interstitial hepatitis, a slight glycosuria with increased thirst. Furthermore, in addition to the negative physical signs, there are no clinical evidences of cirrhosis; hence we exclude this rare complication.

A frequent complication of diabetes is croupous pneumonia. This occurred early in the clinical course of the case under consideration (see "History"), and is invested with a certain degree of diagnostic significance.

The long continuance of the glycosuria, considered in connection with the polyuria (?), the excessive thirst, and the progressive emaciation, together with the various other confirmatory evidences, leads to the formation of a diagnosis of diabetes mellitus, of the form known as diabetes decipiens, first described accurately by P. Frank, in 1794, but distinguished prior to this time by Th. Cowley (London Med. Jour., IX., 1788).

(To be continued).

REPORT OF ONE HUNDRED AND THIRTY OPERATIONS, PERFORMED AT THE LONG ISLAND COLLEGE HOSPITAL DURING THE REGULAR SESSION OF 1893–94.

BY J. S. WIGHT, M.D.,
Professor of Operative and Clinical Surgery at the Long Island College Hospital, Brooklyn, N. Y

Continued from page 621.

CASE XXXIII.—J. R. J., a sailor, twenty-seven years of age, had an abscess of the face in front of the left ear. The pus had been evacuated by incision. Fistulous tracts were left, interfering with repair. October 13, 1893, Dr. Rogers opened these tracts and curetted the walls of diseased tissue. The patient made a rapid recovery.

CASE XXXIV.—G. S., a school-girl, eight years of age, four weeks after an attack of pleuro-pneumonia was admitted to the hospital with empyæma of the left pleural cavity. On Monday, October 16th, at Prof. McCorkle's clinic, I performed the following operation, the patient being etherized: A straight bistoury was pushed through the chest wall between the sixth and seventh ribs; a small lithotomy staff was passed into the pleural cavity, and the point of it brought into the space between the fourth and fifth ribs, where the bistoury again was pushed through into the cavity; and then the point of the staff was brought out through this opening; a drainage tube was fastened to the neck of the staff, and drawn through both openings, the perforated part of it being in the pus cavity. No attempt to force out the pus was made. The patient was put to bed, and the pus was left to work its own way out.

CASE XXXV.—Mr. M., a cooper, fifty years of age, had an operation for radical cure of hydrocele of the left side one year ago. During the last few weeks the left side of the scrotum began to enlarge. October 17, 1893, he was admitted to the hospital for further treatment. An incision demonstrated that the previous operation had been a success. Two cysts had formed; one in front of the testicle, containing about an ounce of fluid; another at the bottom of the testicle, containing about two drachms of fluid. The small cyst came very near being overlooked. Both cysts were opened and packed with aseptic gauze. The previous operation was performed by making two punctures, and then inserting a drainage tube, which was left in several days to permit irrigation and cause irritation, which was followed by repair.

CASE XXXVI.—A fireman, twenty-five years of age, on September 22, 1893, fell upon his left shoulder, and had a comminuted fracture of the left clavicle, just outside the middle. He was kept in bed upon his back, with his left forearm supported in a sling, and with a three-pound sand-bag resting on the broken ends of the bony fragments. After union had taken place, a sharp point of bone projected under the skin, being the end of a piece of bone which had been caught between the ends of the principal fragments. October 18, 1893, a longitudinal incision was made, and the point of bone was cut off with a bone-chisel. The wound was closed from the bottom with sutures, and the result was primary union.

CASE XXXVII.—Same patient as represented by Case XV. She consented to an exsection of the ribs. The fifth and sixth ribs were exposed between the two openings already made. A piece about two inches in length was cut out of each with a back-saw. The pieces were lifted out with a lion-jawed forceps, the knife detaching them from the soft parts. The thickened costal pleura and the intercostal tissues were cut away with scissors. The intercostal arteries were secured with the suture ligature. Though the operation was not severe, nor lengthy, the patient showed signs of collapse. The subcutaneous injection of three ounces of warm saline fluid caused immediate improvement.

CASE XXXVIII.—M. R., an eight-year-old school-girl, fell down stairs two weeks ago, and struck her nose on the edge of the step. On the 18th of October, 1893, she was admitted for relief of deformity following fracture of nasal bones. The fragments were depressed and spread out laterally. After etherization, the fragments were compressed from side to side with the thumb of the surgeon, and elevated by means of a strong grooved director put into the nose. The epistaxis was quite severe, but soon ceased. The nasal bones were subsequently moulded by pressure applied from day to day.

CASE XXXIX.—J. C., an agent, seventy-one years of age, had a large chronic hydrocele of the left side of the scrotum. It had been tapped several times by Dr. Bodkin, his family physician. After the last tapping, the sac had filled up quite rapidly. The patient was in the hospital a week to prepare him for an operation. He required a very large quantity of ether to make him insensible. On incising the hydrocele blood and serum escaped in abundance. A considerable clot was taken out. The thickened wall of the tissue was cut off on both sides, and the cavity was packed with aseptic gauze. This patient suffered from mental derangement. After leaving the hospital, he wandered away one night and either fell or threw himself into the East River and was drowned.

Case XL.—A girl, about ten months of age, had a hair-lip of right side, with a fissure between the right superior maxilla and the intermaxillary bone. The fragments of the upper lip were cut from the underlying hard parts in the usual way. The side of the intermaxillary bone was cut off with a pair of scissors, so that it fitted against the right maxillary bone, when it had been reduced by forcible pressure backward. The freshened edges of the lip-fragments were brought together by means of deep and superficial sutures. This case did well.

Case XLI.—An Italian housewife, about fifty years of age, came to my clinic October 25, 1893, to request me to remove a tumor from the front of the left shoulder. It was a moderate-sized lipoma, with the cephalic vein running directly over it. The field of operation was made aseptic. A linear incision was made, enabling me to enucleate the tumor. A row of deep sutures closed the wound, and a row of superficial ones put the cutaneous edges in apposition. On the 28th primary union had taken place and the deep sutures were removed, the superficial ones remaining a few days longer.

Case XLII.—A laborer, nineteen years of age, had a contusion of the right side of the neck two weeks previous to the 25th of October, the day on which he came for advice. The contused tissues had become infected with pyogenic organisms, forming an abscess, which was opened, and gave exit to pus having an offensive odor, such as we get from the vicinity of the alimentary canal. The abscess had pointed within, and the pressure of the knife caused it to open in the pharynx, since pus without blood was expectorated.

Case XLIII.—Mrs. M., sixty-five years of age, a patient of Prof. Skene, was brought to my clinic for operation in October, 1893. She had a large tumor on the left side, extending from the crest of the ilium well up on the chest. The tumor was about ten or twelve inches in length, and five or six inches in width. It was movable and fluctuating. It was lobulated like a lipoma. It had been growing about twenty years. But it had some appearance of being a cystic sarcoma. Assisted by Prof. Skene the growth was removed, when it was found to be a cyst containing a dark, semi-fluid mass, which readily poured out of the ruptured wall. The flaps were brought together by means of both deep and superficial sutures. No ligatures were used, the bleeding being controlled by pressure-forceps, and then with the deep sutures. At the close of the operation, in order to relieve the shock, about two ounces of a warm saline solution were infused. The wound, at the end of the week, was healed by primary union, at this time the last of the sutures being removed. On the eighth day the patient sat up. She had not suffered from fever, and had been free from pain.

Case XLIV.—A ship's steward came to the hospital, having a purulent discharge from the right mastoid, pain in the right side of the head, and temperature of 104°. Linear osteotomy of the right mastoid was performed. At the end of five days he was discharged at his own request, having improved.

Case XLV.—A sailor, about twenty-five years of age, had a large hæmatocele of the leg, the injury having occurred several days before admission to the hospital. It was thoroughly opened and disinfected. No suppuration occurred, a speedy recovery taking place.

Case XLVI.—A sailor, about twenty-two years of age, had a large abscess over the right ear. It was opened extensively and disinfected. There was no history of injury. The cavity healed in a few days.

Case XLVII.—H. W., a laborer, nineteen years of age, while playing foot-ball, got into an altercation with another player, who stabbed him in the left side with a clasp-knife. He was brought to the hospital, and an examination revealed two wounds, one over the seventh rib and the other over the cartilages of the ninth and tenth ribs. There was some emphysema above the wound over the seventh rib. An explorative incision showed that the knife had gone upward and penetrated the pleural cavity between the sixth and seventh ribs, puncturing the lung. In the case of the other wound the cavity of the chest had been opened by a very small wound, just large enough to insert a probe. Both wounds were packed with aseptic gauze, to afford drainage. On the 2d and 3d of November, the temperature had risen to 103°. It then slowly subsided. I inserted my finger so as to feel the wound in the lung, but there was no tendency for the lung to collapse, even while the air rushed out and in during the efforts to breathe.

Case XLVIII.—H. J., a laborer, thirty-nine years of age, came into the hospital October 27, 1893, with appendicitis, which, as the patient said, was a recent attack. After consultation it was thought best not to operate until more decided indications appeared. On the morning of October 30th the patient became greatly depressed, with temperature two or three degrees below normal, and had a severe cold sweat, as if suffering from severe shock. He consented to an operation, which was performed at four in the afternoon. An incision about two and one half inches in length was made a little outside of the mid-line between the superior anterior spinous process of the ilium and the umbilicus. It was rapidly carried down until the ileum came into view. The portion which goes to the caput coli was pushed inward, when the pus began to flow out, the abscess cavity being on the right side of the abdomen. Adhesions had formed so as to prevent the lifting up of any one part of the intestine in the field of operation. All the parts were fastened in every direction, and could not be moved without tearing open the intestine, or opening the general peritoneal cavity. There was about three ounces of very bad-smelling pus which was sponged out with aseptic gauze. I put my finger down to the posterior, or bottom, of the abscess cavity, and cut through to the end of it with my scalpel, a distance of over three inches, and then introduced a perforated drainage tube, washing out the blood and pus with a 1–10000 solution of mercuric chloride. Some aseptic gauze was introduced in front, and the incision was closed rapidly with sutures, as the patient showed signs of severe collapse. The shock was relieved with a warm saline infusion. The next day I directed the irrigation of the abscess cavity and the parts connected with it, by means of both saline and mercuric chloride solutions, one or the other being used every six hours. The solutions were about 100°. The saline was an ounce and a half of sodium chloride to the quart. The mercuric chloride was 1–15000. This patient rallied, and promised recovery. After two weeks he slowly failed and died from inanition.

CASE XLIX.—G. H., twenty-nine years of age, a patient previously operated on for abscess of the thigh, was etherized November 1, 1893, he having consented to more radical measures. An incision some ten or twelve inches in length laid open the cavity of the abscess, which extended down to the head of the femur and could not be completely laid open on account of the overlying blood vessels. The old wall of the cavity was scraped out, and the wound dressed antiseptically.

CASE L.—J. O., a seaman, forty-eight years of age, was admitted to the hospital in October, 1893, having his right humerus dislocated under the clavicle. The accident had happened some five weeks previous in a storm at sea, and the captain had not recognized the nature of the injury. The shoulder was rubbed with sweet oil daily until the first of November, when the reduction was accomplished in the following manner: Ether was given; the adhesions were gradually and carefully "broken up" by manipulation; traction downward and backward and outward, with the stockinged foot on a compress in the axilla, was made; then the arm was carried across the chest; again the traction was made with more force; and at the same time lateral traction was made by means of a towel passed around the upper part of the arm; then the arm was more forcibly carried across the chest, when the head of the humerus resumed its socket, being under the acromion. The arm was bandaged across the chest and the patient put to bed.

CASE LI.—G. M., a three-year-old boy, had congenital phymosis, with nervous symptoms. The prepuce was amputated in the manner I have already described, and the adhesions were readily torn across. This patient was put in the upright posture too soon, and had ether-syncope, which was relieved at once by lowering the head.

CASE LII.—N. G., a six-months-old girl, had a large nævus on the left side just below the scapula. The tumor was hæmorrhagic. The ether was administered with my inhaler, the mouth-piece covering the eyes as well as the nose and mouth. The etherization occupied about one minute. A strong surgeon's needle was passed under the base of the growth vertically. A strong, double silk ligature was carried under this needle transversely, and tied above and below, completely strangulating the entire mass.

Case LIII.—An Italian laborer, forty-five years of age, was struck on the back of the head November 8, 1893, by a stone thrown by a boy, and received a contused wound of the scalp and an indented fracture of the skull. Under ether the edges of the wound were cut out, and the small pieces of bone of the external table were scraped out. The wound was just over the posterior end of the longitudinal sinus. The edges of the flaps were sutured together, and the parts dressed antiseptically. Primary union took place, and the patient left the hospital in a few days in good condition.

Case LIV.—A thirteen-year-old boy caught his left little finger in a ring, and tore the soft part off for the most part as far up as the middle of the first bone. It had been treated for some days, without any hope of saving a useful finger. Under ether the finger was amputated, including an oblique portion of the head of the corresponding metacarpal bone. The flaps were brought together with deep sutures which answered for ligatures as well. The case did well.

Case LV.—A seven-year-old boy had right-sided hare-lip. He also had advanced angular curvature of the thoracic spine. This was marked enough to interfere with his being on his back during the operation, which was performed November 8, 1893. The incisions were made in the usual way. The only peculiarity of the operation was in the use of my inhaler, which has been fully described elsewhere. The ether was given by Dr. Cochran. Chloroform could not excel it in advantage. As I regard it, ether is the safer anæsthetic.

Case LVI.—A laborer, twenty-four years of age, was admitted to hospital with a purulent bursitis over the left elbow, November 10, 1893, which had been caused by a slight wound three weeks previous. The forearm was very much swollen and painful. The bursa was incised and the pus let out. The inflamed limb was wrapped up in a cloth wet with a warm ten per cent. solution of sulphurous acid and glycerine. This acid is an excellent antidote to suppuration, when properly applied externally. The case improved rapidly, and the patient left the hospital in a few days.

Case LVII.—A four-year-old boy fell some five or six feet upon his head, striking upon a brick and receiving an extensive lacerated and contused wound of the scalp. He was brought to the hospital on the evening of November 18, 1893. The next day the lacerated tissues were raised from the skull, which was found fractured quite extensively, but without any depression of the fragments. The soft parts were disinfected as completely as possible and then brought together with sutures. The day after the temperature went up considerably, and on the day after that one of the sutures was removed to permit drainage and disinfection. The case improved rapidly, and repair took place in a short time.

Case LVIII.—A laborer, thirty-seven years of age, was "boxing" with some companions, and struck upon the end of his right thumb, receiving a compound dislocation of the end-bone. The distal end of the middle thumb bone was projecting out upon the palmar aspect. The distal end of the projecting bone was cut off by Dr. Wallace, when the reduction was easily made. The patient did well.

Case LIX.—Mrs. M., about forty-five years of age, had extensive varicose veins of the posterior part of the right thigh, extending from the popliteal space nearly to the gluteo-femoral groove. She was operated on November 22, 1893. The veins were adherent to the connective tissue, so that they required to be dissected out "in mass," leaving an open wound some ten or twelve inches in length. The wound was closed by two rows of sutures, one deep, the other superficial.

Case LX.—Mr. O'C., twenty-nine years of age, after an amputation at the knee-joint, had a fistula left between the femoral condyles posteriorly. It refused to heal. Under ether a grooved director was pushed through the fistula and the tissues were cut through from within outward with a long bistoury. The "wall of fibrine" was curetted out, and the tags of scar tissue were cut out, the wound being packed with antiseptic gauze.

Case LXI.—Mrs. ——, about thirty-two years of age, was brought into the hospital November 22, 1893, after making an attack on a policeman, who struck her several blows on the head with a pistol, in order to subdue her. Three contused wounds were explored on the head. One just above the forehead disclosed an indentation in the skull, which was of sufficient importance to call for the use of the trephine. The indentation extended through the entire thickness of the bone. The button of bone was immediately replaced and held in position by means of the sutures which held the flaps together. The button of bone necrosed, and the perijacent bone came away some weeks after, in the form of an irregular ring.

Case LXII.—A colored man, twenty-six years of age, came into the hospital November 20, 1893, having a large swelling in left inguinal region. It had a semi-fluctuating feel, but was quite firm. November 22d I introduced an exploring needle, and it seemed to be solid all the way through. Then I made an incision and enucleated a very much enlarged glandular structure. The wound was dressed antiseptically. This patient improved very much, creosote being given internally, and applied externally in solution.

Case LXIII.—An able-bodied sea engineer had his left thumb crushed by machinery. There was a compound comminuted fracture of both bones. A disarticulation was made through the metacarpo-phalangeal joint, saving enough flap to cover the end of the bone. Such a retrenched thumb is very useful.

Case LXIV.—November 24, 1893, Prof. West had at his clinic a patient, about twenty-five years of age, who had empyæma of the right pleural cavity, accompanied by perforation of a bronchus, the air entering the pus cavity. Two days previous the aspirator had been used to draw off about a quart of badly smelling pus. The patient's condition was very serious, the blood being insufficiently supplied with air. An operation was advised, and the patient desired it. It was thought best to try an anæsthetic. Dr. Cochran began to give ether, but found that the patient's condition was such as to forbid its further use. Then I operated. A bistoury was thrust between fifth and sixth ribs; a lithotomy staff was inserted, and the point brought against the pleural surface between seventh and eighth ribs; then the bistoury was again thrust through the chest wall, so as to let the point of the staff come out; a drainage tube was tied to the neck of the staff and drawn through the pleural cavity; a large quantity of very fœtid pus came out. The operation occupied about thirty seconds, and gave the patient great relief. Death occurred on the following day—from exhaustion.

Case LXV.—L. J., a French seaman, thirty-two years of age, had an injury of his right knee, followed by a very large periarticular abscess. On the 28th of November, 1893, without ether, the abscess was opened by Dr. Brooks. The incision was in front of the patella, and quite extensive. Another incision on the inner aspect of the knee was made into very much infiltrated tissue. This patient made a very rapid recovery.

Case LXVI.—A. A. M., a domestic, twenty years of age, on December 6, 1893, was operated upon for large tubercular glands of the right side of the neck. Two years previous she had a glandular abscess just above the clavicle, where a large scar fastened itself to the covering of the brachial plexus. An incision was made over the sterno-cleido-mastoid, but did not seem to be suited for the removal of the glandular mass. A long vertical incision was made further back, and through this the enlarged glands were removed in several pieces. The operation was difficult, on account of the numerous firm adhesions. The enucleation was made in the way we have already described more than once. This patient was given the iodide of iron, the iodide of potassium and the iodide of arsenic; and was discharged from the hospital on the 20th of December in excellent condition.

Case LXVII.—A housewife, thirty-one years of age, had suffered for several months from suppurative disease of the right knee. There was systemic infection. She was in such a low state that anæsthesia had to be abandoned. In the condition she was in, the blood cells could not carry enough oxygen to sustain life, when the ether began to produce its characteristic effects. The suppurating tissues on the thigh were quickly incised, and an abscess over the sternum was opened. Aseptic dressings were applied. Ten drops of the sol. brom. calcium and arsenic were ordered to be given after each meal.

To be continued.

OBITUARY.

WILLIAM W. REESE, M.D.

As we go to press we learn of the death of William W. Reese, M.D., in the eighty-third year of his age.

THE BROOKLYN MEDICAL JOURNAL.

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EDITORIAL.

JARVIS S. WIGHT, M.D., LL.D.

Prof. J. S. Wight has recently received the degree of LL.D. from Tufts College.

THE NEW BUILDING.

Members of the profession will be delighted to hear that the Committee, appointed by President McNaughton of the Medical Society of the County of Kings, to raise the necessary funds to erect a new building for the County Society, has organized, with Dr. William Maddren as Chairman. The representative character of the committee and the zeal and efficiency of its chairman augur well for the success of the movement.

ANTITOXIN.

Whether antitoxin is to suffer the same fate as tuberculin can only be determined by patient waiting. The results which have thus far been obtained are, to say the least, calculated to inspire one with the hope that something has at last been discovered which will help to mitigate a disease which up to the present time has been almost absolutely uncontrollable.

The antitoxin of diphtheria is prepared in the following manner: Bacilli which have been taken from the throat of a patient are cultivated in serum, agar or bouillon, and this culture injected hypodermically into an animal, a horse, for instance. The animal has an attack of true diphtheria, and recovers. Another injection is made, and a second but milder attack follows. These injections are continued until there is no reaction, and the animal is "immune." It is the blood-serum from such an immunized animal that is used for the treatment of diphtheria in man. The antitoxin, in amount varying from 5 to 10 c.c., is injected hypodermically between the shoulder-blades, or in the arm or thigh.

There are two preparations of antitoxin now obtainable; one prepared by Behring, the discoverer of the remedy, and the other by Aronson. As is usual in such cases, there is difference of opinion as to their respective merits. Prof. Baginsky, of the University of Berlin, in an article in the *Medical Record* of October 6th, states that "Hans Aronson has followed the direction of Behring, and has made a serum which appears to be equally as good, if not better than that made by the former gentleman"; and Dr. Louis Fischer, of New York, who has recently returned from Berlin, in an article in the same journal, says that the Aronson serum is stronger than that of Behring. Both these gentlemen seem to have observed the results of the treatment with the Aronson serum, and to have had but little opportunity to judge of the merits of that of Behring. There are, however, those who prefer the "Behring-Ehrlich Heil-serum" to that of Aronson.

Prof. Baginsky states that the mortality in the Kaiser and Kaiserin Friedrich Hospital has, in 163 cases, been but 14.37 per cent., and says "this excellent percentage has never yet been equalled with our best form of treatment, even in the mildest epidemics."

Antitoxin is also recommended to confer immunity during an epidemic or when an individual has been exposed, as well as a method of treatment. Dr. Fischer, in the article referred to, gives a history of his first case treated with antitoxin in private practice, and it is certainly an interesting one. In this case he used 5 c.c. of the Aronson serum. He also employed 2 c.c. as a prophylactic in another child in the same family, and with success up to the time of his report.

EUTHANASIA, WITH A VENGEANCE.

A correspondent of one of the daily papers has given an account of a recent battle between a Japanese and a Chinese man-of-war. After describing most minutely the conflict, from start to finish, he states that the number of those who were hopelessly injured on the Chinese vessel was very large, and that the surgeon, as he passed among the wounded and discovered one whose injuries would, in his judgment, be necessarily fatal, injected from an atomizer into the mouth and nostrils the vapor of prussic acid, with the immediate effect of putting an end to the suffering and the individual at the same time. The story is, of course, a canard, but its realism is worthy the pen of a Poe.

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PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society's Building, 356 Bridge Street, on Tuesday evening, September 18, 1894, at 8.30 o'clook.

The President, Dr. Geo. McNaughton, in the chair.

There were about 200 members present.

The minutes of the June meeting were read and approved.

REPORT OF COUNCIL.

The Council reported favorably on the application of Dr. Earl H. Mayne, Bellevue, 1893, and recommended his election to membership.

PROPOSITIONS FOR MEMBERSHIP.

The following propositions for membership were presented:

Dr. Charles W. Hogeboom, Coll. of P. & S., N. Y., 1857; proposed by Dr. Wm. Browning; Dr. Geo. McNaughton.

Dr. John C. Colgan, 191 Nassau St., L. I. C. H.; proposed by Dr. Geo. McNaughton; Dr. D. Myerle.

Dr. Burdett O'Connor, 149 Clinton St., L. I. C. H., 1894; proposed by Dr. J. A. McCorkle; Dr. Geo. McNaughton.

Dr. Henry F. Adams, 9 Palmetto St., Coll P. & S., N. Y., 1890; proposed by Dr. Albert H. Brundage; Dr. Sidney H. Gardiner.

Dr. Wm. Brinsmade, 123 Joralemon St., Coll. P. & S., N. Y., 1892; proposed by Dr. Francis H. Stuart; Dr. D. Myerle.

Dr. E. E. Warren, Kings Co. Lunatic Asylum, Coll. P. & S., Baltimore, Md., 1892; proposed by Dr. Belle V. Aldridge; Dr. David Myerle.

Dr. Henry M. Bishop, 338 Ninth St., Coll. P. & S., N. Y., 1869; proposed by Dr. Geo. McNaughton; Dr. Wm. Browning.

The Secretary read a communication from Dr. Z. T. Emery, Health Commissioner, calling attention to the fact that typhoid fever having been removed from the list of diseases necessitating the exclusion of children from the schools, many physicians had inferred there was no longer any necessity of reporting cases of this disease to the Health Department; that this impression should be corrected and all physicians urged to report such cases. The Commissioner also suggested that true croup be added to the list of diseases to be reported, and requested the sentiment of the Society on these points.

On motion this communication was received and referred to the Council.

The resignation of Dr. Francis Mansfield, on account of removal from the city, was read, received and referred to Council.

ELECTION OF MEMBERS.

The following having been regularly proposed and favorably passed upon by the Council, were declared elected to membership, viz.; Drs. S. J. McNamara, Dr. Geo. E. West, Alfred S. Ambler, Wm. E. Sylvester.

SCIENTIFIC BUSINESS.

The Chair introduced Dr. G. Alder Blumer, Medical Superintendent of the Utica State Hospital, who presented a paper on "The Halliday Case."

Dr. Wm. Browning read a paper entitled, "Some Etiological Types of Hysteria."

Dr. John C. Shaw presented a paper on "The Recent Theories as to the Nature of Hysteria, and a Brief Consideration as to its Treatment."

The Chair introduced Dr. Geo. Huntington, of Lagrongeville, N. Y., who made a few remarks in regard to "Huntington's Chorea."

The Secretary announced that the following Committees had been appointed by the Chair, as requested at the last meeting:

Committee on Revision of By-Laws.—David Myerle, J. C. Shaw, J. M. Van Cott, Jr., E. D. Page, J. H. Hunt.

Committee on Revision of Fee Bill.—Charles Jewett, John Harrigan, Thomas M. Rochester, F. E. West, L. S. Pilcher.

COMMITTEE ON NEW BUILDING.

(*Consisting of two Members from each Ward of the City.*)

Ward 1—F. H. Stuart, W. H. Skene; Ward 2—W. J. Gilfillan, J. Von Glahn; Ward 3—J. W. Hyde, J. H. Sterling; Ward 4—L. M. Fleming, H. Noss; Ward 6—Wm. Hutchinson, A. F. Bristow; Ward 7—Wm. Browning, J. B. Bogart; Ward 8—H. C. O. Steinke, James J. Keyes; Ward 9—H. C. McLean, H. R. Maine; Ward 10—A. J. Dower, L. M. Dusseldorf; Ward 11—E. H. Bartley, Wm. Maddren; Ward 12—G. B. O'Sullivan; Ward 13—W. A. DeLong, Reuben Jeffery; Ward 14—A. A. Weber; Ward 16—Wm. Moitner; Ward 17—J. A. Jenkins; Ward 19—David Myerle, J. L. Kortright; Ward 20—C. F. Barber, W. N. Belcher; Ward 21—Geo. A. Evans, J. H. Droge; Ward 22—H. B. De Latour, P. H. Sturges; Ward 23—F. Bailey, H. A. Fairbairn; Ward 24—S. H. Benton, J. M. Winfield; Ward 25—W. W. Browning, W. L. Rickard; Ward 26—G. E. Law, Z. F. Dunning; Ward 27—H. B. Bender, E. C. Bernauer; Ward 28—A. H. Brundage, S. H. Gardner; Ward 29—W. S. Applegate, J. T. Duryea; Ward 30—Tunis Schenck, E. H. Mayne; Ward 31—R. L. Van Kleck, J. C. F. Hill.

On motion of Dr. J. H. Hunt, duly seconded and carried, a unanimous vote of thanks was tendered to Dr. Blumer, Dr. Huntington, and Dr. Clark, the invited guests of the Society.

There being no further business, on motion the meeting adjourned.

DAVID MYERLE, M.D.,
Secretary.

BROOKLYN PATHOLOGICAL SOCIETY.

The 358th regular meeting, June 14, 1894.

Dr. Wm. Belcher in the Chair.

Minutes of last meeting read and approved.

Dr. E. H. Wilson reported for the Microscopical Committee on Dr. Browning's specimen of tumor of the brain presented at the previous meeting. All the sections thus far made show only compressed brain tissue; will examine more fully and report again.

Dr. Jelliffe read a paper upon "Perforating Ulcer of the Foot" with report of two cases.

Discussed by Drs. Shaw and Wilson.

Dr. Eliza M. Mosher read a paper entitled "Adeno-Sarcoma Uteri."

DISCUSSION.

Dr. Wilson: This tissue was referred to me by Dr. Mosher. It was hardened in celloidin, stained with eosine.

Microscope showed adenoid material, granular tissue, blood and spindle cells. It is on the border line between adenoma and sarcoma, but malignant.

I do not think anything could have been done better than was done at the first operation by galvano-cautery, unless the organ had been totally extirpated.

Dr. Belcher: In answer to Dr. Mosher's first question, I would say that it is difficult to say how long the tumor had been growing. It is unfortunate that an autopsy was not allowed.

Dr. Polak: This case reminds me of one which had been mistaken for extra-uterine pregnancy. The patient, aged twenty-four, had had 16 self-induced abortions. Menstruation had again ceased, there was fluctuating tumor, pain, cast expelled from uterus, peritonitis and tumor pushed above Poupart's ligament. Temperature 102°—105° F. So convinced was I that immediate interference was indicated that I called in Dr. Jewett in January and the abdomen was opened. Adhesions were very marked, and he cut right into a cyst by mistake. He took out a portion of the tube and removed tissue which to the eye appeared to be placental, but under microscope proved to be adeno-sarcoma. Dr. Wilson saw the tissue. It must have started in the tube. The growth has diminished and under anæsthesia it can only be felt as a thickening. I doubt the pathological findings and believe it to be placental, and yet it was the prettiest adeno-sarcoma under the microscope I ever saw.

Dr. Belcher: That reminds me that a piece of placenta was sent by way of a joke to a prominent pathologist in New York, who diagnosed it malignant tumor.

Dr. Mosher: This specimen was *not* placental tissue.

Dr. Shaw presented a tumor of the lateral ventricle of the brain.

Dr. C. T. Craig, U. S. N., read an exceedingly interesting paper upon "Transportation of Cholera by Flies."

Dr. Wilson said that immediate disinfection of all discharges from cholera patients would positively prevent the spread of cholera in this way.

Dr. Clayland presented abscess in kidney caused by a kick; case had been diagnosed Pott's disease; also, an aneurism of aorta from a man who had been in perfect health until struck by a trolley car. Coroner decided the trolley car was the cause of the aneurism and the death of the man. Also a case of twin pregnancy, extra- uterine and intra-uterine, Jewish woman 10-para, had not menstruated for six weeks. After dinner felt bad, ate a banana for supper, wanted to defecate, was unable, took licorice powder, later an enema without success. Dr. Clayland was called in, saw trouble requiring operation. Laparotomy was done with the result of securing the double specimen here shown.

The Society went into executive session.

F. J. Shoop, M.D.,
Secretary.

BROOKLYN SOCIETY FOR NEUROLOGY.

A regular meeting of this Society was held at the Society Rooms, 356 Bridge Street, Thursday, September 27, 1894.

Meeting called to order by the President, Dr. T. M. Wells.

Minutes of previous meeting read and approved.

On motion Dr. Elliot, of Dr. Coombs' Sanitarium, was elected to membership.

Dr. C. F. Barber then read a paper entitled Chorea as a Fatal Disease, which in brief was as follows: Practitioners see many cases of Sydenham's chorea every year, but we seldom hear of fatal cases. Practitioners as a rule do not think it a disease which needs much attention. This is not as it should be. Few authors even state that it may be fatal. Deaths are usually ascribed to complications. Statistics of the British Medical Association place the death rate at 2%. In a neighboring city 64 deaths occurred in ten years. Had seen two fatal cases, both in young persons, and had memoranda of four others. First case a boy of six years, ill two weeks. Contraction commenced in mouth and gradually extended and increased in violence. Treatment had no effect and death occurred in a few days. Autopsy findings negative. Second case, male aged eighteen. Had a previous attack the year before following a fall, from which he recovered. Second attack followed an arrest after which he developed a very violent form of general chorea. Movements ceased during sleep. Death occurred on the fourth day. Chloral treatment was the only one which produced any results, and one can not hope to successfully treat these cases until the pathology of the disease is better understood.

DISCUSSION.

Dr. Browning did not think that these cases represented the ordinary form of chorea because the spasms were paroxysmal, a peculiarity of chorea gravidum. They were often due to fright. Had seen several fatal cases.

H. C. Wood still upheld the spinal theory of pathology of the disease.

Dr. Brush thought that the pathological findings were those of vaccular congestion and degeneration of the cortical cells. Either might be due to the other. The congestion to overactivity or the degeneration to toxic substances circulated in the blood. Secondary degeneration of the spinal centres might follow the cerebral.

Dr. Wells did not believe in the theory of degeneration of the nerve cells, because the cases usually recovered and he did not believe that such cells returned to the normal. Had found chloral to be the best hypnotic in the disease.

Dr. Browning believed that regeneration might take place. That night chorea did best under ergot. Regarded the nocturnal as evidences of cerebral and not spinal trouble, because they were associated with talking and dreams.

The meeting then adjourned. A.C. Brush, M.D..
Secretary.

THE BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

At the annual election of the Brooklyn Dermatological and Genito-Urinary Society the following gentlemen were chosen: H. H. Morton, M.D., for president; F. C. Raynor, M.D., vice-president; F. A. Jewett, M.D., executive member; J. M. Winfield, M.D., secretary.

Eighteenth regular meeting, March 9, 1894.

Dr. Sherwell in the Chair.

The first case shown was one of peculiar distribution of psoriasis. M. D., æt. twenty-two, consulted Dr. Sherwell for a scaly eruption over the face and neck. The patient is a rheumatic subject.

Dr. Morton remarked on the peculiar distribution and said that by the unobserving the lesion might easily be mistaken for a squamous syphilide. He cited a case of syphilis he had in his service at the Kings County Hospital where the lesion closely resembled the one under discussion.

Dr. Sherwell also presented a case of multiple gummata of the skin, calling attention to the slowness of this syphilitic lesion in the skin. There was a gumma of the nose resembling a sarcomatous growth.

Dr. Morton raised the question of the possibility of it being sarcoma.

Dr. Sherwell said he had a complete history to guide him in diagnosis.

Dr. Morton said that undoubtedly the slow process of solution seen in cutaneous gumma of the face was due to the sluggish circulation of these parts.

Dr. Sherwell did not agree with him, but thought it was the rule of all gummatous lesions of the face.

Dr. Mosher related the history of a case in some respects similar to the one shown where recovery took place rapidly under mixed treatment.

Dr. Morton presented a case of lateral curvature of the penis, resulting from a gonorrhœa contracted eight months previous.

Dr. Raynor considered it a simple infiltration of the spongy body following an acute chordee.

Dr. Mosher thought galvanism to be the proper method of treatment, as this would tend to promote absorption.

Dr. Sherwell was of the opinion that it might be a gummatous deposit.

Nineteenth regular meeting, April 13, 1894.

The President, Dr. Sherwell, in the Chair.

A case of congenital ideopathic tylosis, presented by Dr. Sherwell. A. G., seventeen years old, native of the United States. There is an extensive condition of tylosis involving the palms of the hands and plantar surface of the feet, which had existed to a slight extent since birth, but had become more noticeable since she was seven years of age. She has never been under any special medication, which excludes the possibility of it being of arsenical origin.

The diseased condition is improving under the use of a salicylic and resorcin ointment, the strength being about ten grs. of resorcin and half dr. of salicylic acid to the oz.

A case of lupus erythematosus, presented by Dr. Sherwell. The lesion is situated in the center of each cheek. It began about one year ago as a small circular patch which was slightly scaly; this process has gradually extended until it has attained its present size, of about a fifty cent piece. The treatment has been wholly external, consisting of the white lotion.

Twentieth regular meeting, May 11, 1894.

Dr. Jewett, Vice-President, in the Chair.

Dr. Jewett presented a case of scabies to demonstrate the evil results of over-treatment. The whole body was covered with scales and yellow scab, every motion the child made was attended with pain from the swollen skin.

Dr. Winfield presented a case of neurotic eczema occurring in a boy seventeen years of age. He has had a number of attacks during the past four years. The eruption always appears first around the mouth, and usually begins suddenly. At present there is a complete encircling patch, about two inches wide around the mouth, beginning about one-eighth of an inch from the vermilion border of the lips. Part of the patch is actually inflamed while the rest is dry and covered with thin scales. Dr. Winfield called special attention to the fact that the boy had never been troubled with any skin disease until the advent of puberty. On examination of the genitals he was found to have a tight and adherent prepuce. The general condition of the patient was good, and all treatment seemed to be of no avail. The disease would at times disappear only to recur at the slightest nervous upset. The proposed treatment was to remove the prepuce, on the presumption that there was enough reflex irritation from the abnormal genital condition to produce the skin lesion.

Dr. Raynor quoted a number of cases of neurotic eczema, where operations about the genitals seemed to produce good effect in controlling the disease.

Dr. Morton also presented a case of neurotic eczema occuring in a child nine years of age. The disease began about one year ago; at times the whole cutaneous surface is involved ; at present, however, only the face, neck, fore-arms and buttocks are affected. This, like the neurotic eczemas, being of sudden advent, the mother is able to tell a recurrence a day or so before the attack comes on by the acute premonitory erythema. The patient is pale and very nervous and has a long and adherent prepuce.

Twenty-first regular meeting, June 1, 1894.

The President, Dr. Sherwell, in the Chair.

A case of seborrhœa capitis, presented by Dr. Morton. The patient was a child. The mother said that, at first, there was a number of small circular patches over various parts of the head; from her description these patches must have resembled ring-worm.

When the doctor first saw the child the whole scalp was more or less covered with scales.

Dr. Holsten did not consider it to be a true seborrhœa nor yet a true eczema seborrhœicum.

Dr. Sherwell thought it was a tinea tonsurans which had arrived at a stage where it was about to cure itself and was not then as a rule contagious.

Dr. Morton cited a case occurring in a man aged thirty, who had suddenly begun to lose his hair in patches. There was no evidence of tinea, but, on microscopical examination he found the hair taken from the margins of the patches to be filled with trichophyton spores.

A case of Raynaud's disease, from chronic contracted kidney, presented by Dr. Morton. In addition to the evidences of Raynaud's disease there were three or four pearl-like tumors on the chin; on puncturing them they were found to contain a chalky substance.

Dr. Holsten thought the tumors to be enlarged milium the contents of which had undergone chalky degeneration.

A case of syphilitic tumor of the leg which had been mistaken for a melanotic sarcoma, presented by Dr. Mosher. M. D., female, aged forty-five, came to the Brooklyn Hospital in the fall of 1890. About one year previous she noticed a hard walnut-sized swelling on the outside of the left leg. On account of the pain she consulted a physician, who incised the tumor under the impression that it contained pus. Three months after she was admitted to the hospital, the incision made for the search of pus had not healed, the leg was swollen and tender on pressure. On consultation it was decided to cut down on the periosteum, thinking the trouble might be a localized periostitis ; the operation gave some relief to the patient, but the wound refused to heal and gradually assumed the character of an ulcer. A portion of the diseased tissue was submitted for examination and the report returned was melanotic sarcoma. Amputation was advised, which was refused by the patient. About this time the narrator saw the patient, and for various reasons suspected the trouble to be syphilis, and accordingly put her on anti-specific treatment; at once the condition began to improve, pain became less, the ulcer healed, and she was once more able to walk. In three months she was practically well. The case demonstrated how closely syphilitic new-growths could resemble those of malignant type.

A case for diagnosis, presented by Dr. Morton. M., aged ten years. Four years ago a small ulcer appeared on the inner side of the leg about three inches below the knee; this gradually increased in size. A month later a similar one formed on the other leg in about the same situation. They remained open about one year, and every spring since then they have recurred. There is at present an ulcer about the size of a fifty cent piece on both legs, in the same situation as the former ones. Part of the lesion is covered with dark brown scabs, the rest is open and foul looking, bathed with a thin watery pus. Around the margins there are a number of minute tubercles quite similar to those seen in lupus.

Drs. Sherwell and Holsten did not consider the lesion to be lupus, but rather a patch of eczema which had been aggravated into an ulcer by bad and irritating treatment.

Dr. Winfield favored lupus, which was the diagnosis Dr. Morton had had in mind.

A case for diagnosis, presented by Dr. Morton. Female, age forty ; three months before consulting the doctor she had had a few small blisters discretely scattered over the face, both arms and legs. These disappeared in a short time and gave place to the present eruption, which is of a lichenoid character, situated on the face, left arm and both legs.

Drs. Holsten and Winfield did not consider it to be a lichen, but an eczema with a lichenoid manifestation.

A case of superficial syphilitic ulceration of the face, having a distribution like lupus erythematosus, presented by Dr. Winfield. Female, age twenty-eight, came to the out-patient department of the Long Island College Hospital for the relief of a butter-fly-shaped ulceration of the face. The diseased surface was covered with scales, some of which were very superficial, whilst others were rather hard to detach, and their removal was attended with slight bleeding. Some of the scales seemed to penetrate into the sebaceous ducts, on removal small plugs were seen similar to those in lupus erythematosus. The patient gave a clear history of syphilis, and was put on anti-specific treatment, which caused the lesion to heal.

Case of syphilitic psoriasis showing result of treatment, presented by Dr. Morton. The patches on the forearms and hands had been dressed with mercurial plaster supplementing mixed treatment; all of them had healed, whilst those on the elbows and arms were ulcering and scaly,

James MacFarlane Winfield, M.D.,
Secretary.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

THE TREATMENT OF FLOATING KIDNEY.—Reineboth, (Jena, 1892, *Centralblatt für Chirurgie,* 1894, No. 20, 1894.)

Riedel (Berliner Klin. Wochenschift, No. 28, 1892) performed nephrorrhaphy in eight patients. As a result of this experience it was found that sutures made to include the renal structure and surrounding adipose tissue were insufficient for the purpose, and suture of the fibrous capsule alone by means of catgut was subsequently substituted. This, however, only permits of fastening of the lower half of the organ, or that portion which projects below the twelfth rib, and fixation of the upper half must be accomplished by some other method. This is done by splitting the fibrous capsule for its entire length at the posterior edge of the kidney, loosening it from its attachments to the latter as far as possible and tamponing the space thus formed by means of a strip of iodoform-gauze. The gauze is pushed as high up as possible between the exposed renal surface and the diaphragm. The remainder of the wound is also tamponed with iodoform-gauze. The strip of gauze is allowed to remain for several weeks, and upon its removal two broad granulating surfaces are found, lying opposite to each other. These become attached in the further progress of the healing and the kidney thus becomes secured along its whole posterior border.

The results thus far obtained are sufficiently encouraging to warrant further trial of the method.

CLINICAL AND EXPERIMENTAL STUDIES IN HYDRONEPHROSIS. — Tuffier, (*Ann. des Malad. des Org. Génito-urin,* 1894, No. 1.)

The etiology of hydronephrosis still remains more obscure than that of any other surgical renal affection. The present paper is based upon a number of experiments upon animals, as well as upon 12 personal operations in cases of intermittent hydronephrosis and 45 nephropexies for movable kidney. The origin of hydronephrosis, and particularly of the intermittent variety of the affection due to abnormal mobility of the kidney, is discussed. In floating kidney flexion of the ureter may result in obstruction to the flow of urine to the bladder, distension of the pelvis of the kidney and consequent hydronephrosis. Reposition of the organ, as for instance when the patient assumes the recumbent position, removes the flexion, the kidney moving upward toward the lumbar region. As a further clinical fact it is sometimes observed that, when the pelvis of the kidney is greatly distended the obstacle to evacuation is suddenly overcome and the hydronephrosis disappears, gradually reappearing until the former condition of tension is present.

T. pursued exactly this mechanism of origin of intermittent hydronephrosis in animals. By artificial fixation of the kidney in a position to produce a curve of the ureter and consequent distension of the pelvis, the renal function continuing, the curve is converted into a decided flexion, and hydronephrosis occurs. The latter may be overcome at will by simply replacing the displaced kidney. If the latter has become fixed in its abnormal position the flexion and hydronephrosis can only be overcome by strong and steady pressure of the fluid in the renal pelvis.

Fixation of the floating kidney is advocated in cases of hydronephrosis due to this cause.

HERNIOTOMY IN STRANGULATED HERNIA OF INFANTS. — C. Stern, (*Centralblatt f. Chirur.*, May 12, 1894.)

The author adds 51 cases of inguinal herniotomy to the 87 cases reported by Knobloch, collected, with but three exceptions, between the years 1876 and 1893. Each case is carefully studied in all its features, special attention being given to the age of the child, the variety of hernia, the contents of the hernial sac, the duration of the strangulation, the operative procedure followed, the result and notes of clinical peculiarities, if any. In addition 3 cases of umbilical herniotomy are reported. Only those cases up to the fourth year of life are included in the study.

In Knobloch's 87 cases, 50 were under one year of age. In Stern's 51 cases 34 were under one year; 13 belonged to the second year; 3 belonged to the third year, and one to the fourth year.

S. recommends, in all severe abdominal diseases in children, to examine the hernial openings. While the symptoms do not differ materially from those observed in adults, there is one striking peculiarity observed, namely, the retention of urine. This symptom, as previously pointed out by Paget, is rare in adults as compared to children suffering from strangulated hernia. The mistake of confounding strangulated inguinal hernia with hydrocele and consequent puncture of the sac has occasionally been made. With proper precautions this may be avoided.

A study of the prognosis shows that, of 44 cases included in this position of the study, and occurring within the antiseptic and aseptic era, 6 proved fatal ; *i.e.* a mortality of 13.6 per cent. The showing therefore is rather more favorable than herniotomy for strangulation in adults (18.9 per cent. as revealed by a study of 733 cases). The better prognosis in infants as compared to adults is explained by the fact that in the latter the operation is very frequently demanded in old and feeble subjects in whom the anæsthetization adds a very serious danger to those of the strangulation, as well as the herniotomy itself.

Early operation is recommended. Should warm baths and inversion prove insufficient to accomplish reduction, an anæsthetic should be administered. This being without result, the operation should be proceeded with at once.

A number of cases continued to be suckled by the mother and were successfully treated as outpatients, being brought daily to the clinic for re-dressing. Absolute cleanliness is insisted upon in the after-treatment.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

A Case of Extra-uterine Fœtation.—George J. Engelman, M.D., St. Louis (*Am. Journ. Obstet.;* Vol. XXVII ; No. 5).

The patient had been confined to her bed for six months in consequence of a violent pelvic inflammation when she was admitted to the St. Louis Polyclinic for treatment. After a long course of treatment, extending over several years, she finally became practically well, but was kept under observation.

Prior to her last illness she had passed her usual menstrual epoch by about two weeks, and began to suffer from nausea, with occasional vomiting. Shortly afterward she complained of faintness and pelvic discomfort, which was followed by cramping pains and some bloody discharge from the uterus. Later on she developed symptoms of peritonitis and was sent to a hospital, where she appeared to improve under treatment. The patient endeavored to conceal her pregnant condition, and, being a sick-nurse and well acquainted with the position of the uterus, she endeavored to produce an abortion by introducing her finger into the uterus. In this way infection was carried into her uterus and septic peritonitis developed.

On examination the uterus was found to be slightly enlarged, the left tube and ovary were indurated, the right could not be felt through the sensitive and distended abdominal walls. She died shortly afterward of septic peritonitis.

SARCOMA OF THE UTERUS REMOVED BY PERCHLORIDE OF ZINC (*Univ. Med. Jour.;* Vol. VIII).

The patient, aged forty-four, the mother of eight children, had suffered from pain and hæmorrhage without loss of flesh. The cervix was the seat of a hard nodular mass, extending into the broad ligament. As hysterectomy was impracticable, the cervix was plugged with cotton soaked in chloride of zinc. On the thirteenth day, the body of the uterus came away, the patient having suffered no pain. Recovery was good, with command over bladder and rectum.

The specimen consisted of almost the entire uterus, with orifices of the Fallopian tubes and os uteri. It measured three and one-fourth inches in length, and two and one-fourth inches at its widest part, and weighed three and one-fourth ounces. To prevent the caustic from affecting the vagina, an india rubber cap was secured over the cervix by means of sutures.

THE DANGER OF INTRA-UTERINE INJECTIONS OF GLYCERIN FOR THE INDUCTION OF ABORTION.—Von Pfannenstiel (*Cent. f. Gynæk.*, 1894; No. 4).

The results were such as to warrant a warning against further employment of the medium.

In the first case the woman succumbed to a nephritis from which she was suffering. In the bladder bloody urine was found, which condition was not present during life.

In the second case slight insensibility, cyanosis, fever to 39° C. and bloody staining of the urine, which was previously normal, occurred within an hour after the glycerin injection. The urine soon returned to normal. The microscopic examination showed hæmoglobinuria.

It is strange that other observers have never noted such an occurrence. But the second accurately studied, and uncomplicated case, speaks more than many positive cases. Hence, this method must be forsaken.

THE DANGERS OF GLYCERIN INJECTIONS INTO THE UTERUS, FOR THE PURPOSE OF INDUCING PREMATURE LABOR.—*Embden, Med. Record,* July 28, 1894.

Primipara, aged twenty-four, in the ninth month of her pregnancy. She has had albumin in the urine for three weeks, the amount of which is rapidly increasing in the last few days, in spite of a very strict milk diet (seven per cent., Esbach's method). The quantity of the urine is about one quart in twenty-four hours. The sediment contains a few white blood-corpuscles, no red ones, a few renal epithelial cells, and a few hyaline casts. The patient has a headache, feels sick to her stomach, and very tired. She has slight œdema of the feet and hands. Under these circumstances it seemed best to induce premature labor as soon as possible.

March 19, 1893, 1 P.M.—Injection of 90 c.c. pure glycerin between the uterus and fœtal sac (Dr. Charles Jewett). This had to be done in chloroform narcosis, as the patient was very nervous. Soon after she recovered from the narcosis she had slight pains at longer or shorter intervals until 7 P.M. At that time the uterus was very sensitive, but there were no real contractions.

At 7.30 P.M. the patient had a very severe eclamptic convulsion of about three minutes' duration. As it was very desirable to terminate labor as soon as possible, and the cervix barely admitting the little finger, manual dilatation was very skilfully performed by Dr. Jewett, at 9 P.M., and a living child extracted with his own axis-traction forceps. The temperature was normal all the time, but the pulse-rate was very slow, ranging between 50 and 55 per minute; before the injection it was 78. The urine was not drawn off before delivery. The first urine after delivery—drawn with the catheter—was of a dark red color. It contained no red blood-corpuscles, but a large quantity of hæmoglobin. After twelve hours the water was only slightly colored, and twenty-four hours after delivery the color was normal. The albumin disappeared gradually. The next day after delivery a severe icterus set in, and the patient fell in a semi-comatose condition, which continued for six days. By this time the icterus and the coma had disappeared, and the patient recovered gradually.

(That the use of glycerine for the production of premature labor may produce unpleasant and possibly dangerous consequences seems possible. I have never seen such a result even when used in cases involving grave renal lesion, and these isolated cases are insufficient to contra-indicate its use until larger observation has been made.—W. B. C.)

CORRESPONDENCE.

ENTRANCE EXAMINATION—METHODIST EPISCOPAL HOSPITAL.

229 Gates Ave., Brooklyn, N. Y.,
September 18, 1894.

To the Editors of the Brooklyn Medical Journal :

As an item of possible interest concerning hospital work in Brooklyn, I present the following facts concerning this year's entrance examination for Internes at the Methodist Episcopal Hospital.

The examination was held March 31, 1894. There were two vacancies to be filled, for two years each, commencing respectively July 1, 1894, and January 1, 1895. Of late years the applicants have increased in quantity and quality to such an extent that the tests now applied are prolonged and severe, although acknowledged to be fair. At this examination twenty-one candidates hung on to the bitter end. Four hours written and four hours oral and practical work was required. The written examinations comprised the following questions :

ANATOMY.

1. State fully the anatomical features of the various forms of club foot, and give the surgical relations of the structures involved in the production and maintenance of each form.

2. Draw a diagram of the brachial plexus, state its relation and give the course and distribution of its various branches.

SURGERY.

1. Give the etiology, symptoms, differential diagnosis, prognosis and treatment of osteomyelitis.

2. Give the causes and treatment of retention of urine.

3. Give the diagnosis and treatment of carcinoma of the breast.

4. Describe the operation of ligature of the femoral artery, including the preparations for the operation.

GYNÆCOLOGY.

1. What are the usual consequences of rupture or undue relaxation of the pelvic floor in women, and what the operative measures required for their relief?

2. Describe the methods of physical examination for the diagnosis of diseases of the female pelvic organs.

3. Give the signs indicative of ectopic gestation.

MATERIA MEDICA.

1. What are cardiac stimulants? Name the principal ones.
2. What is opium? Name its principal alkaloids, and their chief therapeutic uses.

PHYSIOLOGY.

1. Describe stomach digestion.
2. Describe intestinal digestion.
3. What are the functions of the kidneys, and what do they separate from the blood?

OBSTETRICS.

1. What are the chief causes of flooding during and after labor; what is the treatment?
2. What are the predisposing causes of puerperal convulsions?
3. How would you treat puerperal convulsions?

GENERAL MEDICINE.

1. Give the symptoms and differential diagnosis of variola.
2. Give the symptoms of acute gastro-duodenitis, with involvement of the bile-ducts.
3. Give the symptomatology and treatment of simple anæmia.

The oral work embraced questions under the same heads. The practical work was in diagnosis, medical and surgical, urinalysis, microscopy, bandaging and application of splints.

The examinations were conducted and markings given by the hospital staff and their associates, twelve in number. Each subject had a maximum marking. The maximum differed according to the assumed relative value of the subject.

It is worthy of remark that after the totals were collated the first man stood 1225.5, the second, 1225, a difference of only five tenths of a unit.

GLENTWORTH R. BUTLER, M. D.
Chairman of Examining Committee.

MISCELLANEOUS.

HEALTH DEPARTMENT.

CIRCULAR OF INFORMATION TO PHYSICIANS REGARDING THE MEASURES ADOPTED BY THE BOARD OF HEALTH FOR THE PREVENTION OF TUBERCULOSIS IN THE CITY OF NEW YORK.

The communicability of pulmonary tuberculosis has been so thoroughly established, and is now so generally recognized by the medical profession throughout the world, that the Board of Health of New York City has determined that the time has arrived when active steps should be taken, looking towards its prevention in this city. The Board has therefore resolved to adopt the following preliminary measures:

First—The Department will hereafter register the name, address, sex and age of every person suffering from tuberculosis in this city, so far as information can be obtained, and respectfully requests that hereafter all physicians forward such information on the postal cards ordinarily employed for reporting cases of contagious disease. This information will be solely for the use of the Department, and in no case will visits be made to such persons by the inspectors of the Department, nor will the Department assume any sanitary surveillance of such patients, unless the person resides in a tenement-house, boarding-house or hotel, or unless the attending physician requests that an inspection of the premises be made; and in no case where the person resides in a tenement-house, boarding-house or hotel will any action be taken if the physician requests that no visits be made by inspectors, and is willing himself to deliver circulars of information, or furnish such equivalent information as is required to prevent the communication of the disease to others.

Second—Where the Department obtains knowledge of the existence of cases of pulmonary consumption residing in tenement-houses, boarding-houses or hotels (unless the case has been reported by a physician and he requests that no visits be made) inspectors will visit the premises and family, will leave circulars of information, and instruct the person suffering from consumption and the family as to the measures which should be taken to guard against the spread of the disease, and, if it is considered necessary, will make such recommendations for the cleansing or renovation of the apartment as may be required to render it free from infectious matter.

Third—In all cases where it comes to the knowledge of the Department that premises which have been occupied by a consumptive have been vacated by death or removal, an inspector will visit the premises and direct the removal of infected articles, such as carpets, rugs, bedding, etc., for disinfection, and will make such written recommendations to the Board as to the cleansing and renovation of the apartment as may be required. An order embodying these recommendations will then be issued to the owner of the premises, and compliance with this order will be enforced. No other persons than those there residing at the time will be allowed to occupy such apartments until the order of the Board has been complied with. Infected articles, such as carpets, rugs, etc., will be removed by the Department, disinfected and returned, without charge to the owner.

Fourth—For the prevention and treatment of pulmonary tuberculosis it becomes of vital importance that a positive diagnosis shall be made at the earliest possible moment, and that the value of bacteriological examinations of the sputa for this purpose may be at the service of physicians in all cases not under treatment in hospitals; the Department is prepared to make such bacteriological examinations for diagnosis, if samples of the sputa, freshly discharged, are furnished in clean, wide-necked, stoppered bottles, accompanied by the name, age, sex and address of the patient, duration of the disease, and the name and address of the attending physician. Bottles for collecting such sputa, with blank forms to be filled in, can be obtained at any of the drug stores now used as stations for the distribution and collection of serum tubes for diphtheria cultures. After the sputum has been obtained, if the bottle, with the accompanying slip filled out, is left at any one of these stations, it will be collected by the Department, examined microscopically, and a report of the examination forwarded to the attending physician free of charge.

Fifth—The authorities of all public institutions, such as hospitals, dispensaries, asylums, prisons, homes, etc., will be required to furnish to the Department the name, sex, age, occupation and last address of every consumptive coming under observation within seven days of such time.

It is the earnest wish of the Board of Health that all practicing physicians in this city co-operate with the Board in an earnest and determined effort to restrict the ravages of the most prevalent and formidable disease with which we have to deal.

By order of the Board of Health,
CHARLES G. WILSON, *President.*
EMMONS CLARK, *Secretary.*

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

A TREATISE ON APPENDICITIS. By George R. Fowler, M.D., Examiner in Surgery, Medical Examining Board of the Regents of the University of the State of New York; Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, etc., etc. Pp. 190. Philadelphia: J. B. Lippincott Co., 1894.

In the Annals of Surgery has appeared a series of articles from the pen of Dr. Fowler entitled "Observations Upon Appendicitis." The author has revised and corrected these, and now issues them in this treatise. Dr. Fowler's large surgical experience, both in hospitals and private practice, covering nearly 200 cases of the disease, and his special study of the subject, enenable him to speak ex cathedrâ, and the reader may be sure that in assimilating the contents of the volume he is obtaining the most recent knowledge obtainable.

The chapter on the pathological anatomy of the appendix vermiformis, by Professor J. M. VanCott, Jr., and that on "Bacteriological Considerations" enhance the value of the book.

It is a noteworthy fact that in violation of the custom the publishers make no mention on the title page of five plates, two of which are exquisitely colored, and thirty-five other illustrations, all of which elucidate the text and help to make the volume one of the most attractive which have come to us.

AN ILLUSTRATED DICTIONARY OF MEDICINE, BIOLOGY AND ALLIED SCIENCES, INCLUDING THE PRONOUNCIATION, ACCENTUATION, DERIVATION, AND DEFINITION OF THE TERMS USED IN MEDICINE, ANATOMY, SURGERY, ETC., AND THE VARIOUS SCIENCES CLOSELY RELATED TO MEDICINE, BACTERIOLOGY, PARASITOLOGY, ETC. By George M. Gould, A.M., M.D., Author of The Student's Medical Dictionary, etc. Pp. 1,633. Price $10.00. Philadelphia: P. Blakiston, Son & Co., 1894.

The usefulness of Gould's "Student's Medical Dictionary," would naturally incline us to expect in a more complete work an increase in usefulness proportionate to the size of the work, and in this we are not disappointed. Indeed we were hardly prepared to find a volume which we think may truthfully and within bounds be said to be exhaustive. There may be some aspects in which medical and allied terms can be treated which are omitted here, but we cannot imagine what they are. In addition to the explanation as given on the title-page, we find that the logical relation of words, their bearings and their practical importance to the worker are also considered.

The title "Dictionary" is altogether inadequate to express the scope of the volume. Who expects in a "dictionary" to find a résumé of surgical operations, of bacteriology, of parasitology and of tests ; yet, here fully, such a résumé can be found. Nor is it a "medical" dictionary alone, for all the more commonly-used biological terms are defined, and described in every manner which can be of interest or value.

Another striking feature is the large number of tables ; of arteries, of the aldehydes, of bones, of breath-sounds in health and disease, of foramina, etc., almost ad infinitum, whereby at a glance the reader may catch the correlations of a single fact with many others.

Still another feature is the idea of pictorial illustration which, whenever it could be applied with advantage, seems to have been so applied.

Take it all in all the book is one which will be of great value in the library of every scientific man, whether he be a physician or not.

CARD-NOTES—CURRENT AND THUMB NOTES. Issued by Charles Everett Warren, M.D. Boston, Mass.

Dr. Warren, on the cards such as are used in the Card Index, supplies physicians with abstracts of articles on medical subjects, thus furnishing them the latest notes of advance in medicine, as well as current notes of value in practice.

Thumb Notes comprise items of daily value and interest, which, owing to their brevity, would waste space and stock on the larger standard cards of Notes Current, to which they form a supplementary issue. In the card form they have all the advantages of the Card Index at far less cost. For this reason they can be distributed much more widely than the larger cards.

By collating notes of general value and printing these the cost is reduced to but little over the cost of blank cards, thus enabling every practitioner to have and use the Card Index in a neat form without expense of labor or time. Fifty cards are furnished per week, which can be filed in their proper sequence in five minutes. To write these cards, allowing five minutes to each, would take 250 minutes, or over four hours, and the probability is that they would never be written off, as the trouble and time would not be taken to do so. Even if they were they would be done hurriedly and not neatly.

On the other hand, the printed notes are uniform in appearance and neat in style, and are furnished ready for filing. The saving in time is four hours a week—certainly worth saving.

The notes issued comprise matters of general and daily use, gleaned and condensed from current medical journals and books, including methods of treatment, prescriptions, interesting cases, etc.

The Thumb Notes are issued daily at $2.50 per annum, including paper covers and a set of fasteners or bulletin boards as desired, or on cardboard for filing in card index. To introduce these notes Dr. Warren will send them for three months for 50 cents, including a filing box for 500 cards.

A HAND-BOOK OF MEDICAL MICROSCOPY FOR STUDENTS AND GENERAL PRACTITIONERS, INCLUDING CHAPTERS ON BACTERIOLOGY, NEOPLASMS AND URINARY EXAMINATION. By James E. Reeves, M.D., Member of the Association of American Physicians; Ex-President of the American Public Health Association, etc., with a glossary and numerous illustrations (partly in color). Pp. 237. Philadelphia: P. Blakiston, Son & Co., 1894.

Dr. Reeves, well known as a successful practitioner and sanitarian in the South-West, and as a leading microscopist as well, has written this volume from the standpoint of a general practitioner, whose forty years of active practice as such have made him well acquainted with the needs of the profession in this regard. He has made the subject so simple that those who for any reason are unable to avail themselves of the various courses of instruction in microscopy given throughout the country, and who yet feel the necessity of such knowledge, can make themselves proficient with this book alone.

A MANUAL OF MINOR SURGERY AND BANDAGING FOR THE USE OF HOUSE SURGEONS, DRESSERS AND JUNIOR PRACTITIONERS. By Christopher Heath, F.R.C.S. Surgeon to University College Hospital, etc. Tenth Edition Philadelphia, P. Blakiston, Son& Co. 1894. Pp. 389. Pr. $2.00.

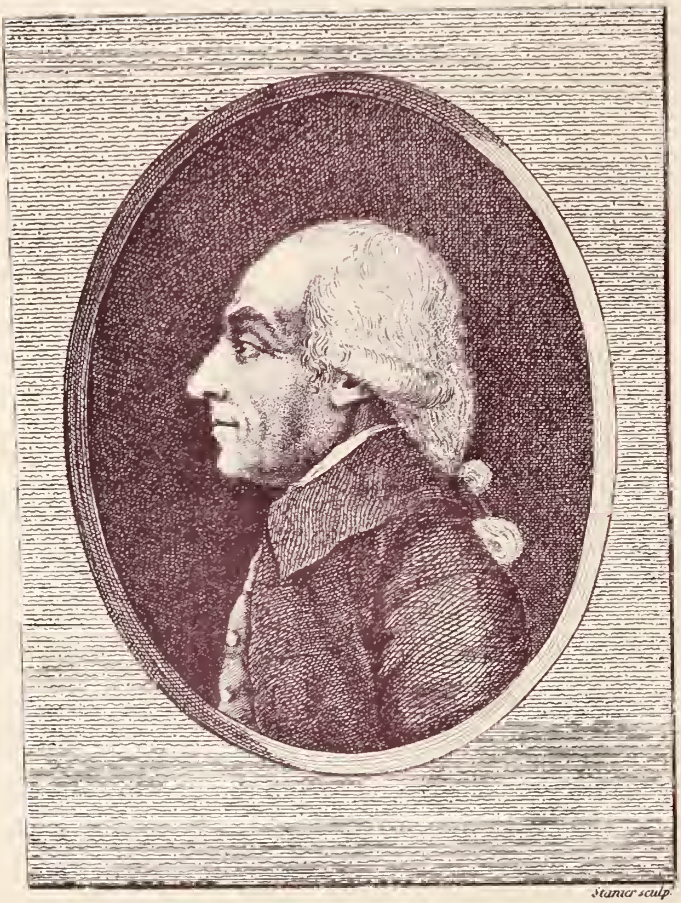
This little volume treats of a thousand and one things which every surgeon should know, and which every physician would do well to know, whether he lays any claim to being a surgeon or not. The fact that it has reached a tenth edition is evidence enough of its popularity. In describing vaccination the advice is to "scratch the arm in three to five places, from three-quarters of an inch to an inch apart, about the insertion of the deltoid muscle of the left arm. * *

The total aggregate area of the resulting cicatrices in a first-class vaccination, *i. e.*, one that is considered to confer the full amount of protection, should be at least a half an square inch."

In discussing anæsthetics the author says of them, "nitrous oxide gas is the safest, ether comes next, then the A. C. E. mixture, while chloroform is the least secure. * * * Ether should be administered in all cases except for (1) prolonged operations about the mouth, nose or jaws; (2) when cough, bronchitis, emphysema or obstructive pulmonary disease exists; (3) for very young children; (4) in advanced arterial disease".

CORNELIUS STALPART VANDER WEL HAGIENSIS MEDICINÆ DOCTOR ANNO ÆTATIS SUÆ LXVII ·

En tibi Stalpartum, medicâ qui quicquid in arte
Rarius occurrit, ſedulus hîcce notat.
Ut noſcas totum, dabit hæc tibi pagina vultum
Sedula ſcripta notant interiora viri.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WILLIAM BLACK, M.D.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

THE TREATMENT OF PUERPERAL SEPTICÆMIA.

BY WALTER B. CHASE, M.D.

From a paper I published in the *N. Y. Journal of Gynæcology and Obstetrics*, in September, 1893, on "The Prevention of Puerperal Septicæmia," I quote as follows: "The diversity of views and consequent diversity of practice, which followed the teachings of ten years ago, have doubtless, very largely grown out of the belief that the phenomenon of labor was not altogether physiological, but that the rules which should govern its management were largely those accepted in surgical procedure, ... and that so far as septic infection is concerned, it is with few exceptions due to external causes. The belief became fixed that the danger could be obviated by antiseptic measure, directed to the maternal parts. . . . . The reaction from the fallacy of such views, made possible by a fuller understanding of the etiology of the disease, has opened the way to more rational methods of preventive treatment."

It may then be confidently affirmed, that as healthy animal tissue contains no* bacteria, puerperal septicæmia is caused by introduction into the genital tract of specific micro-organisms, and the absorption of such germs with their ptomaines and leucomaines into the circulation of the patient. In order of frequency and virulence, they may be classified as follows :

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* Exception is found in the skin.

1st. Streptococcus pyogenes—which is Fehleisen's diplococcus of erysipelas. 2d. Staphylococcus pyogenes aureus, found in ordinary pus. 3d. Staphylococcus pyogenes albus. 4th. Staphylococcus pyogenes citreus; and 5th, possibly bacillus pyocynus and other bacilli. "Except in cases in which the patient was infected prior to labor, by disease of the tubes, uterus, vagina or contiguous structures, suppurative, specific or malignant, the conclusion was reached that the common cause of infection was the hands of the obstetrician, and that in the healthy woman with proper surroundings, puerperal septicæmia was a preventable disease."

The few moments allotted to this paper will preclude any further discussion of the etiological factors entering into this disease. The ordinary symptoms of puerperal septicæmia are too well known to require more than passing notice. Commonly the symptoms manifest themselves—if after labor at term—in from seventy-two to ninety-six hours, and succeeding abortion at a somewhat later period, perhaps several days or a week or two, with chills, often violent, followed by fever and succeeded by sweating and defervescence, being commonly attended with offensive lochia, or with its suppression, partial or entire. In the first class of cases, labor at term, the chance of immunity from sepsis after four days decreases as time advances. The later the attack of fever, if unattended with typical symptoms, the greater the probability that the constitutional symptoms may be due to malaria, other specific fever, or symptomatic or local pelvic inflammations. As to diagnosis in doubtful cases, time may be required to reach positive conclusions; the more so if the lochia is normal; for it must be remembered that all cases of fever in the lying-in chamber are not puerperal septicæmia. A rise of temperature to $99^1/_2°$ or 100° should be regarded as suspicious of trouble and closely watched. The principles of treatment are to remove, if possible, the source of septic absorption and promote thorough drainage of the uterus and vagina. If the surroundings of the patient are unwholesome and unsatisfactory, a change is desirable.

If there is laceration or abrasion of the cervix, vagina, perineum or labia, the absorbent and circulatory vessels, in the exposed surfaces, should be protected and sealed, as far as possible, by the application of pure carbolic acid, or better still, carbolic acid with Churchill's tincture of iodine. Under septic conditions of the genital tract, if it follows labor at term, the external os is usually dilated and the cervical canal patulous. If the uterine cavity contains necrotic material, placenta, membrane, or coagula, they should be removed by the uterine forceps or blunt curette, first having irrigated the vagina and uterus with an appropriate germicide. Should necessity require, the dilator may be used, so as to insure adequate space for effectual manipulation and subsequent drainage. If dilatation is required it may be accomplished by the use of an instrument with expanding blades, or graduated sounds. If the former are used, Walten's or Gooddell's dilators are satisfactory instruments; but time and care should be taken in their use; time that the circular fibres of the cervix be given opportunity to relax and expand, and care that the blades of the instruments do not impinge on the body of the uterus.

The cervix will tolerate almost any treatment, but the body of the uterus is liable to resent traumatism. Dilatation to one-half or five-eighths of an inch is ample. If Hank's or Peaslee's dilators are used, they should first be made to correspond with the curves of the cervical canal, and strong counter-pressure should be made over the fundus, as any attempt to hold the cervix with a tenaculum is almost certain to tear out and thus open up a new channel for septic absorption.

What antiseptic and germicide shall be employed? There are several that are effective and safe, and others which lack some of these qualities. In the latter list I place the bichloride of mercury. Unless the drainage is absolutely perfect, and care is taken to irrigate the uterine cavity with sterilized water after the mercuric solution, enough may be absorbed to produce toxic symptoms; besides, the presence of albuminoids in the secretions would be liable to neutralize the sterilizing power of the mercuric chloride.

In my practice, after years of use, I have never had reason to be disappointed in the antiseptic and germicidal qualities of carbolic acid, in from two and one-half to three per cent. solutions, preferably used hot, (the risk of poisoning is practically nil), and the former estimate of its value is again accepted by Lister, the father of antiseptic surgery.

To make a satisfactory solution of carbolic acid it is always best to first combine with it, an equal volume of pure glycerine. Then you will have a solution; otherwise, without great care you will have only a mixture. It is claimed by competent authority that lysol, one drachm to the pint, has germicidal properties not inferior to the mercuric chloride; besides, it is non-poisonous and non-corrosive. I have used it in septic conditions and in operations with great satisfaction. Another quality which recommends it for constant use, is that it produces a soapy solution and does not injure the skin of the obstetrician or surgeon, which is really an important consideration.

Last, but not least, may be mentioned a solution of the peroxide of hydrogen. This drug has the advantage of great rapidity and great certainty of action upon all pyogenic products, and where the diseased surfaces can be reached it promises to be the remedy par excellence. The frequency of these irrigations will depend on the conditions of the individual case. It is indicated when the putrefactive odor is discernible, with or without elevation of temperature, and the interval may be from six to twenty-four hours. Marked fall of temperature often follows.

Method of Irrigation.—A two or four quart fountain syringe, which has been sterilized, is suspended one or two feet above the patient; a small tip long enough to reach into the uterine cavity will answer well, providing there is always ample room for the return flow, the patient being in the Sims' position with speculum in situ, proper arrangement being made to receive the escaping fluid. If any difficulty is experienced in carrying the stream well upward in the uterine cavity, the tip of the syringe may, by aid of four inches of rubber tubing of proper size, be attached to the old-fashioned gum elastic (not rubber) catheter, size twelve or fourteen, which has sufficient stiffness to insure easy introduction, and when warm, sufficient flexibility that the endometrium be not injured. This can be carried to any part of the uterine cavity, and is much preferable to the double canula, which is liable to become occluded by the debris in the return current. The glass tube if of proper size and curves is a good instrument. If this current contains coagula or other necrotic material, it may be necessary, for its complete removal, to use the blunt curette. The curette and irrigation should succeed each other, until all detritus is removed, and the return stream is clear and uncontaminated. Sometimes the curette can be advantageously used while irrigation is going on. This may require quarts and perhaps gallons of fluid. When this is accomplished, it is my custom to introduce into the uterine cavity a crayon containing five or ten grains of iodoform, by means of curved intra-uterine forceps. If the indications require it, the cavity may be packed with iodoform gauze, or a single strip carried to the fundus, reaching into the vagina, to aid by capillary drainage. Caution is necessary not to place too much iodoform within the uterus, or that the gauze does not contain more than five per cent. of iodoform, as iodoform poisoning and its mischievous consequences may follow.

If the deeper lymphatics and uterine sinuses are not involved, a single curettement with thorough lavage may arrest the sepsis, or it may require repetition; but, if the deeper structures are involved, these measures will not be effective, and at best can only diminish the extent of septic infection.

Here it should be stated that thoroughness, with great gentleness, should characterize all these manipulations, otherwise damage, rather than benefit, will follow their employment, especially if violence is inflicted on the uterine cavity. But puerperal septicæmia may go further, causing peri- and para-uterine inflammation, eventuating in abscess of tubes, ovaries and cellular structure of the pelvis. These complications open up painful possibilities and dread uncertainties. If it leads to suppuration, cœliotomy may be imperatively required. Careful study and differentiation of the individual case must determine the line of treatment. Polk and Edebohls have both done hysterectomy in these conditions, and both report the saving of the patient. Metritis and peritonitis may supervene, and are likely to hazard the life of the patient.

The Fever and Its Treatment.—There is no specific treatment for this malady in medication. The fever is not only distressing, but destructive; while the result of the diminution of the fever by the coal tar derivatives is not curative, only palliative, and its use masks the real condition, and lulls into false security. Occasionally full doses of quinine may be used with advantage; but caution must be exercised lest it depress the heart. To save the patient from the inevitable and dangerous injury of hyperexia, the safest and best treatment consists of extraction of bodily heat by the head and abdominal coil. This requires the constant watchfulness of a relay of nurses. Usually its use an hour, or several hours, will reduce the temperature to a point where the rapid metamorphosis of tissue is prevented, and that without any vital depression. If the coil is applied when the heat is great, say 104° or more, it should be removed when the temperature has fallen to 101°; for further decline is likely to follow after its removal. The temperature of the water supplying the coil may range from 96°

Fahrenheit to 60° or even 40°; watch being kept, if the patient is very weak, that it does not cause depression or shock. I regard this by far the safest of all antipyretics, in all high temperatures accompanied by great weakness. With this, the *free use of alcoholic stimulants* and special heart tonics is indicated. If general muscular weakness supervenes, strychnia is invaluable. If the pulse is infrequent and weak, atropine for its paralyzing action on the cardiac inhibitory nerve and its stimulating influence on the cardiac accessory; if the heart loses its contractile power, digitalis, strophanthus and spartine meet the indication; and if with this is added great pallor from spasm of arterioles, the influence of nitroglycerine, on the vaso-motor system, is of superlative value; all of which are less valuable than thorough alimentation by the mouth, if possible; if not, rectal and colonic, *and the heroic administration of alcohol.* As regards internal medication in the early treatment, the most important remedy has not been mentioned. I refer to salines, preferably sulphate of magnesia, carried to the extent of brisk but not excessive purgation. Its power to unload the pelvic circulation, assisting elimination, and promoting drainage, is thoroughly established. Another remedy, altogether too much in use formerly—I trust less latterly—is opium or its alkaloids. It also masks the real symptoms, and leads to false security and final disappointment. Unless peritonitis or other painful inflammatory conditions are present, morphia should never be employed, and if used at all, with great circumspection. It occasionally happens that great difficulty is found in the earlier stage of fever in the puerperium, to decide whether it is of malarial or septic origin. Just here it is well to disabuse the mind that all cases of fever in the puerperal state are septic, or that if septic the lochia is necessarily abnormal in character. As a type of such a case (which I have previously reported) I allude to a patient suffering from the symptoms of puerperal sepsis of a violent character, in which for many days it was impossible to locate the origin of infection, as there was absence of odor or change in the lochia, and no evidence of any pelvic or peritoneal inflammation, though seen by men eminently capable of making an accurate diagnosis.

Finally, after repeated examinations, a point smaller in area than one's little finger nail was found in the right broad ligament, where there was slight thickening of the tissues. This minute point, in which fluctuation could never be detected (the condition being favorable for it) was the reservoir of contamination, by which the life of the patient for many weeks was in the greatest peril, and attended by the most intense suffering. Recovery followed, after a period of more than three months.

Cases analogous to this, except no evidence of local trouble is developed, recover after anti-malarial treatment. Another complication, of rather infrequent occurrence, of which I have seen two in consultation within the past two years, is that where at the outset mild sepsis was present, which yielded to curettement and local aseptic treatment, and was supplanted by the development of puerperal mania.

The first case was fatal after some ten or twelve weeks, and the second is yet in a critical condition. Other complications may occur, but time forbids discussing them. The treatment here described applies to cases following labor at term, or in the later months of pregnancy, but the same principles apply to the management of sepsis following abortion.

In abortion, septic conditions usually develop more slowly and at a later period. After abortion the necessity of dilatation and the use of the curette is more frequently required, as placental retention is more common and as the cervical canal is unlikely to remain patulous.

So also the uterine tamponade will more frequently be indicated after abortion than after labor at full term.

Too much emphasis cannot be placed upon the necessity of perfect drainage, and in proportion as this is obstructed, the chances of failure increase. Among the commoner causes of imperfect or obstructed drainage may be mentioned flexions, cervical or corporeal, versions to a degree in which the cervix reposes on a higher lever than the corpus, cervical stenosis (most common after abortion) and intra-uterine or intra-mural neoplasms.

Cervical flexions, if obstructive in the presence of abortion, must be overcome by dilatation and intra-uterine tamponade or capillary drainage by a strip of gauze. Extreme flexions, which interfere with drainage as already alluded to, are of infrequent occurrence. Here the fundus must be restored to its normal relation, and effort made to keep it in proper position by tamponing the vagina with iodoform or aseptic gauze—to be removed and reapplied as the circumstances may indicate.

I reported a case of this kind, which appeared in the BROOKLYN MEDICAL JOURNAL of April, 1894. If due to neoplasms, the chances are that a troublesome if not a grave complication is present, and must be met promptly and with careful consideration of the exigencies of the situation. Time will not permit entering upon a discussion of them in detail.

From what has been said, it might be inferred that all cases of puerperal sepsis, with marked local involvement, required immediate interference. Such, however, is not the case.

If, when first seen, the disease has far advanced, with offensive lochia, tender abdomen, profound systemic involvement, very high temperature, and great muscular and vital depression, so that irrigation and curettement are likely to occasion collapse, one may well hesitate before taking the risk.

Such a condition might, under full stimulation and a few hours waiting, present a degree of improvement which would justify interference. The course to be pursued will rest upon the cool judgment and wise discretion of the attendant. I recall a neglected case which had been under the care of a midwife, which I saw ten or twelve days subsequent to labor at five months, in which there was hyperexia, muscular debility, and marked prostration, with evidence of a highly septic uterine cavity—due, as it proved, to retained placenta—when I felt the only chance for the patient consisted in emptying the uterus, even though it involved considerable risk, for without it, it was evident she must perish. Curettement and irrigation was done, but she sank and died in twelve hours.

In another case quite similar, though the temperature was 106°, and the local and systemic involvement more profound, I advised an expectant course, and the patient survived for a slightly longer period.

The first is the only fatal case I have had in which fatal consequences followed curettement, but I have seen a very considerable number of cases in which the conditions were less serious, in which I advised the same local treatment with results highly satisfactory.

It unfortunately happens that many cases of puerperal sepsis are not seen until the disease is so far advanced that profound secondary infection is present, and treatment is unavailing. To this fact must be attributed, at least in part, its high rate of mortality.

To recapitulate, the indications for treatment may be formulated as follows: First, perfect drainage; second, thorough irrigation of the parturient canal with curettement; third, protection of lacerations and abrasions by carbolic acid and iodine, (thus cutting off sources of infection); fourth, early use of salines to the extent of free catharsis; fifth, the avoidance of the administration of morphia and antipyretics; sixth, reduction of hyperexia by thorough extraction of bodily heat by the head and abdominal coil; seventh, thorough alimentation with *general* and *special stimulation* as indicated; eighth, the necessity of prompt surgical interference in cases of suppuration of the pelvic and peritoneal cavities; and ninth, the exercise of sound judgment as to the admissibility of other than constitutional remedies in the presence of profound prostration.

DISCUSSION.

Dr. J. M. Van Cott, Jr.: Mr. President, there are some considerations of a pathological nature which perhaps might be taken up. The doctor has made the statement that in the healthy animal tissues no organism exists. Welch, of Baltimore, has described a bacillus which does exist under the skin of individuals, which has a certain amount of pathogenic properties. Needles introduced under the skin of individuals, where the field of operation has been very carefully sterilized by the best methods, will sometimes carry this bacillus in and produce stitch abscess.

The reason for the toleration of the cervix to traumatism, and the opposite being true of the corpus uteri, I believe to be due to the fact that the cervix is a much more dense tissue than the corpus uteri, both the lymphatics and blood vessels are much more open and patulous in the body of the uterus than in the cervix, and I believe that is the reason why septic material travels so much more rapidly through the corpus uteri than the cervix.

Carbolic acid in five per cent. solution has been shown to be not a germicide under all circumstances. The spores of anthrax and other resistant spores will resist carbolic acid for some considerable time, so it cannot be regarded as the best germicide from the standpoint of laboratory experiments.

There is just one other point which has occurred to me in the course of the doctor's paper, which is unanswerable in most points because certainly the ground he takes is according to the best scientific views—the chloride of iron and alcohol would seem to be in a measure antiseptic, the halogens as a group are supposed to be antiseptic. The chloride of iron, a drachm every hour or two hours if the stomach will bear it, and large quantities of alcohol, will sometimes arrest a septic condition. I have sometimes tried to reason out why that is so, and my belief is that it is because the tissues will be better oxidized to a greater or less extent, and where oxidation is perfect the organisms do not grow so well.

That may be the cause for the fact of the antiseptic effect of chloride of iron and alcohol in large doses in septicæmia.

Dr. R. L. Dickinson: The paper covered so thoroughly the points of treatment that there is little left to say except touching a point which Dr. Chase probably omitted purposely, and that is the preventive treatment, the one point which we who are teachers most insist upon. The danger of infection lies solely in whatever comes in contact with the birth canals. It is no news that some of the German schools detail large numbers of deliveries, series of 1,000 each, in which no vaginal examinations were made, in which therefore no contamination could have been into the birth canal, and in which the results as regards both morbidity and mortality have been noteworthy. That method has been carried to the extreme of depending largely—as noted in a recent paper in the last number of the Centralblatt für Gynecologie—on rectal examinations. In two cases seen since reading that paper I have been able to make out clearly the size of the cervix, the dilatability of the cervix, with its softness or hardness, and even the tension on the membranes by rectal examination only, the recto-vaginal membrane being so thin as to permit of such examination. However, it seems to me that the Germans go too far, because Leopold's last series of 1,000 cases presents 60 cases in which he has failed to make a correct diagnosis of presentation of position, and notably in six face cases, all there were in the series, there were errors in diagnosis. That is explained by remembering that face presentation does not occur in the beginning of labor, and the diagnoses by abdominal palpation were made before labor. This is difficult during labor, because any palpation causes uterine contraction. Therefore it is reasonable to permit a few vaginal examinations to confirm the diagnosis and to make sure there are no complications, such as placenta previa.

These two points, infrequency of vaginal examinations, and rigid care in sterilizing hands and instruments, were the only ones I wished to lay stress upon, and then no one will see the grave cases that Dr. Chase enumerates.

Dr. Francis H. Stuart: I am very much interested in the paper, Mr. President. I cannot fail to endorse pretty nearly all that is said in it. The only point that occurs to me to criticize was this: I could not understand why the doctor spoke so strongly about dilating the cervix in a puerperal patient. I can hardly conceive of the cervix being in a condition, during the two weeks succeeding confinement, when it can possibly need dilatation in order to accomplish any ordinary intra-uterine manipulation that may be required. I have never seen any case where everything that possibly might be required could not be done without any dilatation or preparation of that kind. It seems to me that it would be adding to the dangers of the case to attempt to dilate the cervix beyond what we find it on the fourth day after confinement. If puerperal septicæmia develops, as it usually does on the third or fourth day and later, and not earlier, we all know very well that there is at that time an arrest of involution, and consequently the uterus is quite patulous and admits quite readily the instruments you may be desirous of employing.

He also spoke with great emphasis of using only the dull curette. Usually that is true, but he laid so much stress upon the dull curette, and animadverted against the use of the sharp curette, that there I must take issue with him. I think there are certain cases where the sharp curette is the instrument indicated, and if it is used with care—and no one should go into the body of the uterus with a sharp curette who has not the sense of touch and does not understand the danger possible with it, and also the appreciation of the possibilities of cutting with the sharp curette—used in the way that I have in mind, with great gentleness, the sharp curette will do what the dull curette cannot do, and what, in the cases under consideration, it really is necessary to do.

You go into the cavity of the uterus with the idea of removing any portions of membrane that may be adherent. It is in those very cases where portions of the decidua have remained behind while the bulk of the placenta has been thrown off. Those are cases where there is true adherence. They are not simply torn off and left behind, but are firmly adherent to the uterine wall, and I do not think you will be apt to do nearly so much damage with the sharp curette as you would with a dull curette. That is a point which I think is of very great practical importance. You would go through the motion of curetting the patient with a dull curette and not reach the offensive or offending material that you seek to remove. Also, instead of Sims' position, both for curetting and for irrigation, I would use the dorsal position in preference. In Sims' position, the uterus is inverted to a certain extent, and you do not get the return flow, for one thing. Another thing is, as you do not get so prompt a return, you are very much more apt to get that clogging about the cervix which the doctor was so very careful to warn us against. With a fluid that does not produce coagula, like

Thiersch's solution, or the normal salt solution with carbolic acid, or, what I would prefer, solveol, which is a neutral solution, or is said to be. I would like very much if we could get from our pathologist the truth or falsity of the statement that it has twenty times the germicidal power of carbolic acid. I have been using it for two months or more in the Low Maternity of the Brooklyn Hospital with satisfactory results, using it in preference to carbolic acid; using a one per cent. with normal salt solution, and it has given eminent satisfaction. I would, therefore, place the patient in the dorsal position, without dilating the cervix, use the sharp curette, and then would irrigate, as the doctor suggested, until the irrigating fluid came away clear.

I must confess that I have not had very much experience of late years in puerperal septicæmia, certainly none in my own practice.

Once in discussing a paper here, when I said it was my good luck, Dr. Thomas paid me the compliment of saying it was not luck, but care.

I think the point made by Dr. Dickinson in regard to the prevention of puerperal septicæmia is the one that we ought to bear in mind in obstetric practice all the time. That is the true treatment of puerperal septicæmia; but in the hands of midwives and those careless in the practice of midwifery, and among physicians who neglect the common rules of antiseptic and aseptic procedure, I can readily understand why there should be cases of puerperal septicæmia. But even if a moderate degree of asepsis and antisepsis is practiced in the conduct of cases of labor, I do not see why even under the most unfavorable surroundings of home and nursing we should not have a great deal less of puerperal septicæmia than from the cases referred to in the Doctor's paper would seem to prevail.

Dr. Joel W. Hyde: Mr. President, I certainly, for one, feel very grateful to Dr. Chase for his very scholarly and exact paper.

He has advanced the latest approved methods of treatment of a disease so much dreaded by obstetricians. I do not rise to discuss particularly the treatment advocated in his paper, as little could be added beyond approval, but rather to speak of one feature of my own treatment in this class of cases.

Aside from the constitutional treatment by stimulants and tonics, I have had so good results with the hot bichloride flushings, that I have come to almost entirely depend upon them for success in the early stages of the disease. I am not so alarmed about the use of bichloride under these conditions as some of my professional brethren, never having had an unfortunate result from its use in my practice; and in St. Mary's Maternity. I have frequently demonstrated its value to internes and nurses. I use water at about 110° to 115° Fahrenheit, and I sometimes think that the stimulant effects of the hot water are almost as valuable as the germicidal constituents of the solution.

I generally place my patient in the dorsal decubitus because drainage is the more easily effected in that position, and what is greatly to the comfort of the patient, the external parts can be beter protected against contact of the hot water. I generally use a Chamberlain tube when the os is sufficiently patulous, otherwise a silver double canula; and I never use a fountain syringe with its ineffectual dribbling stream, but an Alpha syringe of the Davidson pattern, which has a continuous strong flow, strong as you desire to make it, and with which you can be absolutely sure that the whole uterine cavity is flushed. I believe that unfortunate results have often followed a too timid flushing. A solution which is allowed to run slowly over only the dependent portion of the uterine cavity as the patient lies in bed is faulty in the extreme, as the points of gravest interest are likely to be untouched by the cleansing process. I may say here, that I often use the carbolic douche in these cases, and think very highly of it, but its use is for subsequent work.

After the careful flushing of both uterus and vagina, search is made for any traumatic conditions which would invite septic absorption, and to these compound tincture of benzoin is freely applied—even passing it up well into the cervix.

I do not favor the packing of the uterus with iodoform gauze and leaving it for many hours. As soon as its meshes are full of albuminous substances, its interstitial capillarity is lost, and it is nothing but a solid body—worthless for drainage, and decidedly harmful for its possible toxic effects.

Dr. John O. Polak: I regret that I did not have an opportunity to hear Dr. Chase's paper; at the same time there are two or three points in sepsis that are of particular interest to me.

In the first place, from the discussion I have been listening to, it seems to me that the doctor has not divided sepsis into two forms, at least in the cases I have had the opportunity of observing there have been two distinct forms of septic fever. There has been a retention form known as sapraemia where we have decomposition of retained membranes occurring in the early days of the puerperium, those cases where after curettage and douching the temperature drops as a rule, providing this curettage is done before any great amount of absorption of ptomaines has taken place, and the patients get well.

Then there is another form due to the introduction of pathogenic organisms occupying the vagina and to uncleanly midwifery, on the part of the attendant, where we have true septicæmia developing late. In some cases carefully observed I have seen absolutely no local symptoms in this form of sepsis, that is, the involution of the uterus, you might say, did not stop at all in its progress; there was no tympanites, no tenderness over the uterus, and yet there were chills and sweats, with a temperature of 104° or 105°, headache, and all the symptoms of general septicæmia. Now this class of cases is not at all amenable to local treatment. I saw a case not very long since in which that was the exact condition, only unfortunately I saw her nine days after delivery and the temperature at that time was 106¾°, and although I cleaned out the uterus thoroughly and drained it, the temperature did not fall and the patient did not rally, for the reason that absorption had already taken place, ptomaines had gone into the system and we had to combat a general condition.

In those cases where you have a local condition, I would place the patient in the dorsal position, thoroughly irrigate the vagina, and then perform curettage with a reasonably sharp curette, such as Sims', then swab out the uterus with peroxide of hydrogen, and irrigate with permanganate of potash in a three to five per cent. solution, which has acted very nicely in these cases, draining the uterus with iodoform-gauze. Although Dr. Hyde says he has seen cases of iodoform poisoning, I believe I can cite a number of cases where I have left as much as 60 grains in pencils within the uterus, there has always been free drainage with the gauze. As soon as the gauze is removed the temperature will rise a little, and then I would wash out the uterus and insert more gauze, keeping up the continual drainage.

Another point is where you have the constitutional symptoms to combat. At one time quinine was mentioned in every case of puerperal fever. I do not think it answers the purpose. We have pyrexia and asthenia to combat, and it is remarkable the amount of whiskey these patients will stand. Bumm has demonstrated this, and in the few cases I have watched I know that whiskey has acted beautifully. In one case the patient took a quart and a pint of whiskey in twenty-four hours. She had a temperature when she started, notwithstanding thorough washing out of the uterus, curettage and packing, which is the proper thing to do. When you see a case of sepsis examine it carefully. Then go over the uterus with the curette under antiseptic precautions, and drain. Combat the fever with whiskey and strychnia; the skin will become moist and the temperature drop. The recommendation that I saw only recently in one of the medical papers, to use an ounce and a half of whiskey every three hours, is nonsense. If you want an effect from alcohol in septicæmia, as far as my experience goes, you need to give it in sufficient quantity to overcome the two points you are trying to combat, that is the asthenia and pyrexia, and certainly I know an ounce every hour has failed to bring the temperature down, while an ounce and a half or two ounces every hour, as long as the patient would stand it, has brought the temperature down.

Certainly then, the treatment I would like to call attention to is :

First : Careful examination of the patient under proper antiseptic precautions, and cleanliness.

Second : Thorough washing out of the vagina and careful curettage with drainage, using the dorsal position, and then when you take out the drainage after twenty-four, or forty-eight, or seventy-two hours, it may be replaced under the same precautions and will be of advantage as perfecting involution.

Fourth : Combat constitutional symptoms with large quantities of strychnia and alcohol.

Though this is practically what Dr. Chase said, I do not think he mentioned the tolerance of the patient to alcohol.

Dr. Chase : In the discussion of this subject, Mr. President, it was my purpose not to dwell upon the preventive treatment of septicæmia, for the reason that it opened so broad a subject that if we attempted to discuss the one we would hardly be able to touch upon the other, and as the paper referred to went over those grounds, I only allude to it here.

I am in hearty sympathy with the statement of Dr. Dickinson, and in the paper referred to I had occasion to discuss those same questions, and alluded to the value of conducting labor without vaginal examinations. I endorse all that has been said here tonight regarding the aseptic management of the puerperal state.

The statement of Dr. Van Cott I have no reason to doubt is absolutely correct. My statements were to be taken as general rather than specific The presence of bacteria in the skin, and the trouble we see in stitch abscess, is testimony that there are bacteria in healthy tissues which are liable to mischief, and yet science has found no way to obviate that difficulty.

Regarding the position taken by Dr. Stuart ; in the first place, he emphasizes the fact that I referred particularly to the dull curette and had spoken against the use of the sharp currette.

I beg to say to the doctor that he is mistaken that I so stated in this paper; though I have stated in other papers, and at different times, my general preference for the dull curette.

Regarding the question of position, and the whole question Dr. Stuart went over, to my mind it makes a great deal of difference whether the sepsis follows miscarriage, or whether it follows labor at full term. As regards the necessity and desirability of dilatation, I quite agree with the doctor that in cases of septicæmia following labor at term the septic uterus is usually patulous and there is rarely any occasion to use dilatation, but my experience is very different in early miscarriages—in the first, second or third month, according to my own observation, and I think I will be confirmed by the experience of others, that in a very considerable proportion of cases one cannot properly use the curette and cannot properly irrigate the uterus without more or less dilatation; and unless one resorts to that, I am unable to understand how one can properly and thoroughly reach the septic conditions and remove them.

Regarding the question of position, I understand very readily how one can, and I have done it myself occasionally, use the curette in the dorsal position, and how, under favorable conditions, with or without the use of the speculum you can introduce a tube into the uterus and irrigate it successfully; but my experience is this, Mr. President, that the attempt to irrigate the uterus after miscarriage without the use of the speculum, is usually accomplished with a great deal of difficulty and very imperfectly done.

Now if it is needful to inspect the cervix, which is often the case, that can be done so much better in the Sims position; for you not only bring into view the cervix but a very considerable area of the vagina, whereas in the dorsal position the chances are you will be able to see with a bivalve speculum only a very small area of the cervix and vagina.

Now regarding the question of the escape of the residual fluid. It is an important matter. It is hardly to be presumed that anybody who uses Sims position for the manipulation, will leave the patient in that position, and therefore if the cervix is patulous drainage must follow when the patient resumes the dorsal state as would obtain if practiced in that position.

Regarding the question of curettage, it is a matter of importance. Ordinarily where we find an adherent placenta in miscarriage, or labor at term, occurring on the third, or fourth, or later days after labor, we will find that the tissues remaining and those which are adherent are easily removed, as a rule, and that they require no more power to remove them than you can exert with the blunt curette; and if under those conditions you attempt to use the sharp curette, unless it is in skilful hands like those of Dr. Stuart, there is great liability of your going further than you wish and unpleasant consequences following. More than once it has happened that the gentleman using the sharp curette under those conditions, on account of the softness of the uterine tissues, has found that his curette has passed into the peritoneal cavity.

There is a great deal of truth in his views of finding cases of puerperal septicæmia, and the men who are responsible for it. I agree with him. In my individual practice for years I have had no case of puerperal septicæmia, but it has been my experience to see numbers of cases with other practitioners, and some neglected cases of midwives, one of which Dr. Gordon will remember, and those are the cases coming under my observation.

I should perhaps make this exception, which I presume is the experience of every member of this Society, that I am occasionally called to treat a case of sepsis following neglected miscarriage at one, two or three months, in my own families, of ladies who have had an early miscarriage without suspecting it, or knowing it and not fully appreciating the risk to which they subject themselves, have been found at a first visit in a state which demanded prompt attention and for which neither you nor I were in any way responsible. Certainly no obloquy attaches to the care of such cases.

It was stated in my former paper that as a rule puerperal septicæmia was an *avoidable* disease, and where the patient was uncontaminated, the responsibility attached to the obstetrician himself.

There are one or two points to which I desire to refer which I did not mention in my paper. Under certain conditions I regard the finger as the best curette possible. If the depth of the uterus is no greater than the length of my finger, as happens after early miscarriage, and I can get the finger into the uterus, it is frequently the most satisfactory curette I know of; I know what I am doing, what I have accomplished, and the manner in which I have done it.

The remarks of the last gentleman who spoke, Dr. Pollak, were certainly interesting, but he labored under the disadvantage of discussing a paper he had not heard. I did not make the exact distinction he did; still, I recognized the fact that there were two kinds of sepsis, one in which the contamination was only superficial, and in which perhaps a single effort at cleansing the parts and the use of the curette would remove the disease, but in the other class of cases there was constitutional involvement in which the poison reached the deep parts of the uterus and uterine sinuses, causing systemic infection, and then we had to rely upon constitutional treatment. I thoroughly endorse what he said as to alcohol. It must be used in heroic doses under those conditions, up to the extent of a pint or three pints a day, all your patient can stand. As a rule you can give such a patient all the alcohol she can take in the form of whiskey or brandy, until you can smell it in the breath, or it produces excitement. It has a power of reducing temperature, diminishing tissue metamorphosis and sustaining the heart which is invaluable and unequaled.

ALEXANDER FORMAN CARROLL, M.D.

Dr. Carroll died in Brooklyn, on November 17th, from Bright's Disease. He was born in Brooklyn in 1866, and graduated in medicine at Long Island College Hospital in 1888. He was a member of the staff of Kings County Hospital and Columbian Dispensary. He leaves a wife, and a daughter two years of age.

TIMOTHY M. INGRAHAM, M.D.

Dr. Ingraham died at Flatbush during the past month in his 73d year. He received his degree in Castleton, Vt., in 1847. During the war he was a contract surgeon. He was a member of the staff of Kings County Hospital.

REMOVAL OF TUBES AND OVARIES, THE LATTER IN THE LAST STAGE OF CHRONIC INFLAMMATION: PAROVARIAN CYST ALSO BEING PRESENT.

BY ALEXANDER J. C. SKENE, M. D.

Read before the Brooklyn Gynæcological Society May 4, 1894.

Patient was first seen about a year and a half ago in consultation; a delicate, nervous woman, with rather poor nutrition, who was then suffering from an attack of acute pelvic inflammation, apparently involving the ovaries, tubes and peritoneum, but extent of the inflammation was not easily made out, could we determine accurately the organs involved, because there was a good deal of fixation and tenderness. If I remember rightly, she had a similar attack, only not so severe, some time before. Operation was indicated at the time and was suggested, but for some reason was not performed. From the temperature, constitutional disturbance generally, and the physical signs, it was presumed that there might possibly be pus in the pelvis somewhere, perhaps in the tubes or ovaries, although that was by no means definite. I saw the case then in consultation, and what I say of it at that time is from my memory. I saw nothing more of her until about a week ago, when I examined her with Dr. Rand whose patient she was, and found that she had never entirely recovered, and had continued to have a great deal of pelvic pain and very decided malnutrition. She was emaciated, bronzed in color, and weak, and never entirely free from pelvic pain, this pain being very much aggravated on exercise, walking or standing; in other words, she had remained an invalid from the time I saw her until a week ago. At that time on examination we found some fixation of the pelvic organs, but not marked. Below or beneath a completely retroverted uterus we found (exceedingly tender and irregular in outline) a somewhat elastic tumor, portions of it seemingly hard to the touch, and other portions elastic or soft tissue. On the right side there was much tenderness, but no tumor. We felt what was presumed to be an ovary, but more because it was a tender point than being able to outline it well. We deemed it necessary to operate; in fact, she came here for that purpose, having in mind all the time that she had been advised to have an operation, and not recovering she came resolved to submit, and last Tuesday Dr. Rand and I removed both ovaries and tubes. The mass we found beneath the retroverted uterus was the specimen I show you, and which is of interest because it illustrates, I think, the condition of the ovary in the last stage of chronic inflammation, or perhaps, in this case, an inflammation that began as an acute inflammation and drifted into a chronic inflammation, ending in the changes of structure which it shows.

I am sorry that I have not the other ovary and tube, because that illustrated the point to which I refer now. The ovary had undergone all the changes which result from chronic inflammation, it was cirrhotic, or sclerotic, whichever you please, atrophied, and had at one point a small mass projecting from its surface, which looked like an ordinary wart, a commencing papillomatous tumor of the ovary. Both tubes appear to be normal, if inflamed at all perhaps nothing more than a catarrhal inflammation, so at the time we saw her, when we presumed the tubes were inflamed, they evidently were.

The uterus was very decidedly enlarged without any evidence of a neoplasm in it that I could make out at an examination, while doing cœliotomy, but looked as if the enlargment was due to sub-involution. This is the ovary, very little changed I fancy from the time that we removed it. In removing it I ruptured a small cyst, and yet one that was too large to be a normal, mature, Graafian follicle. I ruptured it after I brought it out of the abdomen. The fluid was somewhat darker in color than it should be in the normal Graafian follicle. I punctured the other two; one was normal, and the other one evidently was diseased. You see it does not look very much like an ovary, except the ovary of a very old individual, small size and decidedly indurated.

Then I found a very fine illustration of a parovarian cyst, which is separated from the ovary as you see, and also from the tube. It is connected with the tube by a fold of broad ligament. It is a small parovarian cyst which at this examination appears somewhat irregular, but perhaps that is the appearance that a small parovarian cyst has. They are usually globular and not irregular in outline as this is, but from the thin cyst wall and the color of the fluid—it is a little more muddy looking now than when removed—and from the location of it, being connected with the parovarium, I think there is no doubt that it is a small parovarian cyst.

The other ovary was the same as this, with the exception of having no cysts of any size in it, and it had the little warty or papillomatous growth spoken of.

There is a point which I would like to call attention to here, and that is the fact that sometimes a chronic inflammation of the ovaries will end in recovery, when the original structure is all blotted out and they have undergone complete cirrhotic changes. There are other cases where they cause pelvic neuralgia, and the pain is so persistent as to call for operation. In operating one is sometimes tempted to believe that the ovary is not at fault, when he finds it free from active disease. I know I have been, and I presume others have been, in doubt whether it would be proper to remove such ovaries, fearing that they may not be the source, location or cause of the pain. I think, however, that as a rule one is justified in removing an ovary of that kind, or ovaries like that one, if they have been tender, and have caused pain. The way that one is likely to err in the hurried examination which we only have time to make in laparotomy, is to mistake an ovary that is changed because of chronic ovaritis and has become atrophied and hardened, is mostly scar tissue, and there is very little, if any, of the true ovarian tissue left—and the ovary that has undergone atrophy from age. The only way to make the diagnosis in a hurry, is to keep in mind the age of the patient. Now if this had been a patient beyond forty instead of under forty as she was, I should have thought that those ovaries had simply undergone atrophic changes from age, but as she was under forty I was sure that the ovaries were at fault, and gave rise to a great deal of pain and distress. They are more likely to do so, I fancy, from cases I have seen, if they are displaced, and especially if they have a heavy uterus resting upon them. This specimen here was in the most dependent part of the sac of Douglas, right in the center, and the heavy uterus pressed upon it continually. Now, I think, with an old ovary that has run its course of inflammation and has terminated in destruction of tissue sufficient to render the ovary useless and inactive, and is likely to cause distress—I say an ovary of this kind is more likely to keep up pelvic neuralgia; and hence when I find such an ovary in that position, I hold it is one of the indications for its removal. Of course we are rationally conservative and do not like to remove ovaries even if they are atrophied, unless we have some reason to believe that they are giving some trouble, but I believe that that kind of ovary, in the position that I found it, is very surely the cause of the continued pelvic pain, and hence I think the removal is entirely justifiable.

In regard to the removal of the uterus in these cases, that is a question that is agitating the minds of the most profound thinkers and gynæcologists at the present day. We began by justifying the removal of the ovaries when they are diseased, and settled the question. I believe that the removal of the uterus, (if diseased beyond any hope of recovery from less heroic treatment) was justifiable. Now the question of to-day is, I believe, if it is necessary to remove the ovaries because of some disease of these organs, is it not well to remove the uterus also whether it is diseased or not. My own practice, based upon my judgment of such matters, is simply this : If one has to remove the ovaries for good cause and the uterus is involved in a disease that will subside after the removal of the ovaries and the consequent menopause, I would leave it ; on the other hand, if the uterus is cancerous, or if there is in the uterus one of those soft fibroids, the fibroid that grows and gives trouble after the menopause, then I would say that it is justifiable to remove the uterus as well. But if the uterus, as in this case, showed no evidence of malignant disease, nor was there any evidence of the presence of any fibroid, hard or soft, by examination by the vagina before the operation, and the examination while removing the ovaries—and I examined it very carefully, raised it up into the normal position and made sure it was inclined to remain there after the operation—I did in that case as I have done in all others in the past, and as I perhaps will do in all cases in the future—left the uterus alone.

I am not sure that I have kept track of all the discussions about always removing the uterus when the ovaries are removed, but as I understand the argument, it is that to leave an organ that is entirely useless and that possibly may become cancerous, is wrong, and so it should be removed.

Now, I have never been able to reason myself into the belief that we should remove an organ because it *might* sometime or other become diseased. If we adopted that rule of action in surgery, we would remove the uterus after the menopause and every mammary gland, because they might become cancerous and are more likely to after the menopause. The argument in favor of leaving the uterus that is normal, is that it leaves a better condition of the pelvic organs and the patient is less likely to suffer from the sagging of the pelvic floor, which I know is apt to occur after the removal of the ovaries and after the normal menopause, and I believe they are more likely to suffer from displacement of the bladder, and disturbances of the rectum and vagina, if the uterus is removed. In that I may be entirely mistaken. I know that I have answered the question which I raised, as I understand it. In other words, I am not in favor of removing the uterus when the ovaries are removed unless it is diseased, and not only that, but unless the disease is of such a character that there is not any likelihood of recovery. If there was a suppurative endometritis it might be justifiable; certainly if there was any suspicion of cancer it would be justifiable, if that suspicion was based on rational signs sufficiently marked, or if there was one of those soft fibroids which we know now may go on growing, will not yield to treatment short of hysterectomy, and they are not likely to stop growing after removal of the ovaries and the menopause.

That is about the way the matter rests in my own mind at the present time.

DISCUSSION.

Dr. Chase inquired in what way, if any, the function of menstruation was modified by this disease.

Dr. Skene: The patient suffered continuously from dysmenorrhœa during the past few years, sometimes scanty menstruation, and at some times profuse, but always exceedingly painful; in pain more or less all the time, and in extreme pain during the menstrual period. During the entire menstrual period all her symptoms were aggravated very much, so she was obliged to be in bed, and suffered greatly. As I remember it, she has not had any menorrhagia for quite a number of months.

DIABETES MELLITUS:

AN ANALYTIC STUDY OF A CASE IN THE MEDICAL WARDS OF THE LONG ISLAND COLLEGE HOSPITAL, WITH REMARKS ON THE DISEASE.

BY ARTHUR CLARENCE JACOBSON, M.D.

Concluded from page 679.

Rationale of the Symptoms and Signs.—The salient points of the history will now be taken up *seriatim.*

It is probable that the polydipsia is dependent upon the polyuria, the latter being the primary factor, and the increased thirst secondary thereto (Strümpell). Various theories accounting for the polyuria have been offered. It has been said that the excessive excretion of sugar is a cause, in order to dissolve which a large amount of water is necessary, but certain nervous factors would also seem to be implicated. That the latter exert some influence appears probable, since the amount of urine does not always bear a proportionate relation to the amount of sugar excreted. The renal secretion may be abnormally great, but contain little or no sugar, and there are genuine cases of diabetes mellitus in which the amount of urine is normal, or even less, and the patient feels no unusual thirst, as in the case under consideration (diabetes decipiens).

According to another theory, the polyuria is merely the result of the excessive ingestion of liquids, the latter being the result of thirst induced by irritation of the nerves of the mouth and throat by the sugar (Cohnheim).

It may be said that polyuria is not a feature of my case. It is not at present, but during the initial period of the disease and for two or three years subsequent thereto (subjective testimony uncertain), polyuria was a marked symptom.

The bulimia, which, however, is not marked in this case, may be accounted for on the ground of defective assimilation of food. A further factor is the excessive tissue metamorphosis which Gäthgens and others have shown, by means of carefully conducted investigations, to be a constant feature of diabetes.

The acid reaction of the salivary secretion is said to be due to the presence of lactic acid ; hence the amylolytic action of this fluid is checked, and we have here a partial explanation of the failure of the system to dispose of the carbohydrates. We know that the saliva plays an important rôle in the conversion of starch into assimilable glucose, an alkaline medium being essential for this change.

The constipation is to be explained by reason of the fact that the excreted fluids pass off largely by way of the urinary passages, the condition of the alimentary tract being comparable to that of the skin ; indeed, the internal mucous membranes may be considered as an "internal skin," bearing complementary functional relations to the external integument.

The hæmorrhoids may be explained on the same ground as the œdema of the lower limbs, both being due to the sluggish circulation, the result of a weak heart.

The shortness of breath is due to the patient's general anæmia. The acceleration of the respirations (20–25) is a "conservative" effort of nature toward compensation of the abnormal hæmic conditions concomitant with, and induced by, the disease. This increased functional activity of the respiratory apparatus accounts for the accentuated pulmonary second sound.

It is probable that the muscular walls of the heart share in the weakness which is present in the general muscular system. This would account for the decreased intensity of the "booming" quality of the ventricular contraction. This evidence of cardiac weakness is said by Schmitz to be usually present, and is a further factor, in addition to the anæmia, in the causation of the shortness of breath and faintness.

The roughness of the skin is partially dependent upon furfuraceous desquamation of the epithelium. Dryness is the result of abstraction of water from the tissues. The eczema and pruritis are attributable to the irritating properties of decomposing sugar acting on a skin the nutrition of which is impaired owing to the morbid condition of the blood ; also to the dryness of the tissues. The subcutaneous œdema of the lower limbs and the varicose condition of the veins are probably occasioned by the cardiac weakness (vide supra).

The sciatica and occipital neuralgia are minor neurotic manifestations, probably due to peripheral neuritis (Osler). They may be due in part to the attendant anæmia, and as Anstie aptly says, are the "cry of the nerves for better blood." Bouchard has called attention to the abolition of the patella tendon reflex or knee phenomenon, and it is supposed to be caused by degeneration of the peripheral nerves. The loss of power in the extensors of the feet may be attributed to the same pathological condition. Some obscure nervous alteration is doubtless causative of the cutaneous anæsthesia.

The pain in the back and the spinal irritation I believe to be due to spinal neurasthenia, further evidence of which is to be found in the patient's complaints of paræsthesia, as well as in the negative results of physical examination regarding organic nervous disease—no pupillary symptoms, no actual paresis or atrophy of muscles, etc.

The neuralgia of the sacral nerves and the pain in the left inguinal region are in all probability due to pressure induced by an overloaded sigmoid flexure.

In regard to the eye, relative scotoma, especially for white, has been observed in a few cases. Bresgen, Samelsohn, Nettleship, and Edmunds have reported examples of this affection. As stated under "Vision," I find relative scotoma for both white and yellow. It is due to defects in the visual fields, depending on loss of sensibility of a portion of the retina, and is comparable to the cutaneous anæsthesia mentioned under "Cutaneous Affections."

The slow failure of accommodation, causing presbyopia, is to be partly regarded as the result of senile changes in the lens, which have gradually told on the practical efficiency of the eye, and partly as a consequence of failure of the ciliary muscle itself, or of its motor nerves, a well recognized factor in these cases. In explaining the cardiac weakness, I assumed that the muscular walls of the heart shared in the weakness which was so pronounced in the general muscular system. It is probable that the same element enters into the causation of the marked presbyopia observed in this case.

"Hæmorrhages," says Nettleship, "are conspicuous in many of the cases." It is possible that extravasations into the vitreous might produce opacities and the subjective observation of muscæ volitantes; indeed, Leber and Nettleship have recorded such cases.

The substance which imparts the peculiar apple-like or fruity odor to the urine is said by Petters to be acetone. It is stated by Vierordt that it especially occurs in diabetic coma or as the precursor of this condition, but it also exists, often for a long time, without the occurrence of coma; indeed, in most cases it may be considered a phenomenon without significance, since it occurs even in health as a normal product of tissue-metamorphosis (v. Jaksch), being also found in fevers, carcinoma, and psychoses. V. Jaksch describes a form of auto-intoxication [poisoning] with acetone, accompanying symptoms of cerebral irritation (epileptic convulsions) and states of depression.

Vierordt also describes acetone as a product of normal decomposition of albumen. If abundant, it indicates an increased decomposition of albumen. He states that acetic acid is easily broken up into acetone and carbonic acid, and that acetic acid, in turn, is a product of oxidation of beta-oxy-butyric acid. This latter substance, according to Stadelmann and Minkowsky, in union with other fatty acids, is the toxic agent in diabetic coma (acid-intoxication of the organism). This ingenious hypothesis elucidates somewhat the perplexing problem of the clinical significance of acetone and the rationale of its toxic action.

Gäthgens states that the increase in the amount of urea in severe cases is not merely relative, but absolute. While I believe the urea in my patient's case to be relatively increased, it is certainly not absolutely increased, at least not if we judge by the criteria laid down by Tyson and other authorities. The increase is probably due to excessive destruction of the albuminoids, the organism seemingly expending its metabolic energy vicariously, because of the escape from oxidation of the carbohydrates. It has been proven that the system of a diabetic patient destroys a larger amount of albumin than does the system of a healthy individual, the ingesta in both cases being alike.

I am at a loss to explain why emotional excitement should cause an increase in the amount of sugar excreted, nor am I sure that there was a diminution in the amount during, and immediately subsequent to, the patient's attack of pneumonia, not having observed the case at that time. I have merely assumed it as being extremely probable, in view of the temporary improvement which the patient states was concomitant with the attack, or rather subsequent to it, a fact not otherwise readily explainable. No doubt the altered diet is somewhat causative of the diminution in the amount of sugar which occurs in these cases, though doubtless the special modifications of tissue-metamorphosis occasioned by the high temperature or by the disease itself also exert some influence.

Pathology and Pathogenesis.—"We appear," says Roberts, "to be approaching an exact knowledge of the pathogenetic elements of glycosuria, though it is yet manifestly impossible, in the present state of science, to frame a comprehensive and clear theory of diabetes." To elucidate the phenomena of this mysterious disease, physiologists and pathologists have worked most earnestly, and what was once a *terra incognita* is now becoming tolerably well understood. In the opinion of the writer quoted above, it would seem to be highly probable that diabetes consists proximately in some disturbance of the destiny and function of the amyloid substance of the liver (glycogen), depending upon localized hepatic conditions, or upon some remote influence emanating from those portions of the brain and nervous system connected with the liver.

The field of investigation in this enigmatical disease is necessarily extensive and difficult, which in part explains the paucity of results. *A priori*, necrological examinations would be expected to throw light upon the mysterious phenomena of diabetes mellitus, and it is a problem the solution of which has been most industriously sought post mortem ; but the liver has not yet divulged its secret, if it have any.

The scope of this article being necessarily limited, the many factors believed to be operative in the causation of diabetes can hardly be considered with anything like justice, since a brief résumé of them could not adequately cover the vast field of literature pertaining to the multitudinous theories, more or less ingenious, which have been invoked in explanation of the remarkable manifestations of this disease. And after all, no dogmatic statement concerning its pathogenesis can be made, the theories advanced being for the most part purely conjectural and speculative ; hence we dismiss a chapter a than which there is none weaker in the literature of medicine.

Morbid Anatomy.—Exclusive of certain rather frequent complications, such as pulmonary tuberculosis and nephritis, the pathological changes occurring in diabetes mellitus may be said to be trifling, but nevertheless, they have been found with sufficient frequency to deserve mention ; however, it has not been proven that any of them are concerned in the production of the disease.

Dickinson described changes in the central nervous system which he believed to be causative of all cases of diabetes mellitus. He claimed that these changes were constant and consisted in dilatation of the arteries and perivascular spaces, with minute hæmorrhages and disintegration of the nervous elements, resulting in a visible cribriform or porous condition of the white nervous matter. The optic thalami, pons varolii, corpora striata, medulla, and cerebellum, according to Dickinson, are the usual sites of these lesions. Another condition described by this observer is dilatation of the central canal of the cord, most marked in the dorsal and lumbar regions. The same changes, however, have been found in other diseases, and are by no means constant in diabetes. Tyson has never detected alterations in the nervous centres after death. Douglas Powell, however, believes that Dickinson's specimens were examples of positive lesions representing the essential morbid anatomy of diabetes, and Frerichs has observed lesions of the medulla oblongata in frequent instances which are essentially the same as those described by Dickinson, namely, dilatation of the blood-vessels, small capillary hæmorrhages, and microscopic foci of myelitis. Stephen Mackenzie and Seymour have observed hyaloid thickening of the blood-vessels of the brain.

Senator assumes that pancreatic disease is present in about fifty per cent. of all cases of diabetes. It probably operates through the cœliac plexus and its ganglion. The changes most commonly found are cancerous disease, cystic metamorphosis, calculi, and a pseudo-hypertrophy, consisting of connective tissue hyperplasia and glandular degeneration of a fatty nature with atrophy of the glandular structure Lancereaux and Depierre have described a variety of diabetes mellitus characterized by a rapid course—six months to three years—an habitual creamy or fatty diarrhœa, jaundice, and emaciation, in which profound lesions of the pancreas are always found, and constituting a special and distinctive form of diabetes mellitus.

In rare instances, interstitial changes constituting hepatic cirrhosis have been observed. Trousseau and Budd have described such cases. Enlargement and hyperæmia are frequent. Rindfleisch and Senator describe a wine-red reaction of the liver-cells with a weak solution of iodine which is ascribed by Klebs to post mortem changes in the glycogenic substance. This reaction is more striking in the peripheral zone of the lobule, while the central part is nearly or quite normal. The hepatic enlargement is ascribed by Frerichs and Stockvis to a new formation of liver-cells— a true hypertrophy. At times, the organ is found to be lessened in size.

Gamgee has described an intense fatty degeneration of the entire liver, such as is found in phosphorous-poisoning, and more or less fatty metamorphosis is stated by some writers to be common (Osler), but Beale, Frerichs, and Folwarczny assert that the normal proportion of fat in the liver-cells is usually diminished. The last-named investigator has made actual quantitative analyses of the fat found in the liver-cells which would seem to confirm the latter view.

Seegen and Romberg have observed atrophy of the testes, and Hofmeier has reported a case of diabetes occurring in a young woman in whom the uterus and ovaries were found to be markedly atrophied, the former measuring five cm. (two inches) in length.

In cases of long standing, the kidneys are often found to be hyperæmic and enlarged. The renal hyperæmia is due to the excessive functional activity involved in excreting the excess of urine, and the resulting over-nutrition occasions an increase in the renal epithelium and an enlargement and widening of the tubules, the whole organ thus becoming increased in size. The renal-cells respond to the iodine test similarly to the liver-cells. Fatty degeneration of the organ is sometimes observed, and Saundby and Mackenzie describe a hyaline change of the intima of the arterioles and of the tubular epithelium, the latter being most marked in the descending limb of Henle's loop.

Pulmonary phthisis is the most constant secondary lesion. This so-called diabetic phthisis is always tuberculous and is said to result from a caseating broncho-pneumonia. Chronic interstitial pneumonia is sometimes observed, but is rare. It is non-tuberculous, and clinically, the sputum contains no tubercle bacilli.

In the recent literature bearing on the subject of the ophthalmoscopic changes in diabetes mellitus, I find the admirable translation by Dr. L. A. W. Alleman, of Brooklyn, of J. Hirschberg's article on retinitis diabetica, from which I abstract the following points.

This writer divides diabetic retinitis into three classes : (1) An entirely characteristic inflammation of the middle portion of the retina, with small, clear spots, usually with small, punctate hæmorrhages ; (2) hæmorrhagic retinitis, with the consequent inflammatory and degenerative changes ; (3) rare forms of retinal inflammation and atrophy, the exact connection of which with the primary disease is not clearly established.

The author admits that his position is not universally conceded, and quotes other authorities who claim that there is no form of retinal inflammation characteristic of diabetes ; but he still believes, in the light of his own observations, and in that of other students, that this ground is untenable, unscientific, and possesses no tendency toward encouragement of a sound practice.

The patient's right fundus does not present the characteristic ophthalmoscopic appearances described by Hirschberg under class 1, nor do the changes observed typify those belonging to classes 2 or 3. The appearances seem to partake of some of the characters of each class ; thus, hæmorrhages were not discovered in the ophthalmoscopic examination, but it is extremely probable that they exist, the muscæ volitantes observed by the patient being evidence of extravasations into the vitreous. Again, degenerative inflammatory changes are present in the right fundus only, whereas the typical diabetic retinitis is bilateral. Thus we see that the retinal changes in this case are of an arbitrary nature and do not admit of classification according to Hirschberg's teachings.

"The white spots of degeneration differ from the patches of albuminuric retinitis in shape, the tendency to assume a circular form being less marked ; in color, being of a dingier shade of white ; and in grouping, the spots having no tendency toward a stellate arrangement around the macula, as in albuminuric retinitis."

Gowers and Mackenzie have recorded a microscopical examination made by Nettleship. A peculiar hyaloid degeneration, œdema, and numerous capillary aneurisms were the chief changes observed. The presence of these capillary aneurisms affords an explanation of the tendency to hæmorrhage in this form of retinitis.

Prognosis.—Generally speaking, true diabetes is an incurable disease. Cures, however, have been reported, but it is probable that many such cases were of the transient or intermittent variety of glycosuria, occasionally observed in corpulent individuals given to overfeeding, or in those subjected to severe mental strain. This form is very amenable to treatment. Tyson, however, reports a case of true diabetes in a girl twelve years of age terminating in complete recovery, but it is to be borne in mind that apparent recovery does not exclude the possibility of a fresh outbreak of the disease.

My patient's age is a favorable circumstance, the disease being usually far less virulent and more amenable to treatment after the age of forty. However, in view of the fact that rigid anti-diabetic diet and medication have failed to exercise an inhibitory effect on the excretion of glucose, I am disposed to regard the case as one of unusual severity and the outlook as exceedingly unfavorable. The causes of death to be apprehended are marasmus, diabetic coma, pulmonary tuberculosis, nephritis, furunculosis, carbuncles, pneumonia, or cerebral hæmorrhage. According to statistics, the most frequent cause of death is coma. The ability to resist other diseases is markedly impaired.

In regard to duration, the disease has terminated fatally in six days, while on the other hand, Lebert has reported a case which lasted eighteen years. Prout and Bence Jones observed a case of sixteen years duration, and Dickinson one of fifteen years. As a rule, the duration is measured by years. Senator remarks: "Recovery is rare, but death is still more rare."

Stockvis states that toward the close of the disease albumin in considerable quantity is apt to make its appearance in the urine. This fact is invested with considerable prognostic importance, since we may thus often predict the "beginning of the end." At no time while under my observation has my patient's urine responded to albumin tests; hence, no immediate apprehension on this score is to be entertained.

My patient has grown progressively weaker, and I find that the elimination of the urea is gradually increasing. Its continuance may be interpreted as an indication that the tissues still fail to appropriate the carbohydrates, and as a result of the impaired nutrition consequent upon the deprivation we have the clinical phenomenon of weakness. Emaciation has progressed *pari passu* with the weakness and is of such a degree that it may be considered inimical to the patient's life. In the language of Chossat, "Inanition is a cause of death which marches silently in front with every disease in which alimentation falls below the normal standard. It reaches its natural termination sometimes sooner and sometimes later than the disease which it covertly accompanies, and it may supersede the disease of which at first it was merely an incidental element."

Treatment.—The treatment of diabetes is divided into the dietetic, the medicinal, and the hygienic. The first constitutes the essential treatment.

Diet.—The liver, according to Pavy, is a sugar-assimilating, and not a sugar-forming organ. One of its greatest functions is to allow but a minimum of sugar to pass into the circulation. In opposition to Seegen and Bernard, Pavy states that glycogen is not converted into sugar in health, and he has substantiated his theory by actual experiment, showing that there is but a trace of sugar in the portal vein in health.

In diabetes, the power of the liver to assimilate sugar and starch seems to be in abeyance, and indeed, assimilating power over these aliments is not unlimited in health, as has been repeatedly demonstrated by physiological investigations regarding this point; hence the necessity of excluding saccharine and amylaceous substances from the dietary of a diabetic patient.

In brief, the following list of foods and drinks is admissible, and the second list to be interdicted:

Meats of all kinds (except liver), eggs, fish, cheese, butter and cream. Oyster-plant, asparagus (?), tomatoes, almonds, pecan nuts, butternuts, walnuts, and cocoanuts, string-beans, beet-tops, radishes, mushrooms, lettuce and water-cress, cauliflower, spinach and onions. Celery and cucumbers may also be allowed.

The foods and drinks to be avoided are all forms of sugar, all forms of starch, such as ordinary flour, cornmeal, arrowroot, sago, tapioca, oat-meal, barley, carrots, beets, parsnips, pie-plant, peas and beans, chestnuts and most of the fresh fruits, cider, beers, champagne, sweet wines and honey (Hare).

It will be observed that flour is excluded from the dietary, and therefore bread. This presents more difficulty than anything else. When the attempt is made to leave it out persistently, the force of the phrase "staff of life" is, as Flint well says, appreciated. However, gluten and bran bread, and almond and cocoanut biscuits may be substituted, though they are unpalatable and after a time pall on the appetite. It is also difficult to obtain them unsophisticated. Many clinicians agree in not attempting to exclude all the carbohydrates, but allow a few ounces of ordinary bread daily, especially if the substitutes for it cannot be tolerated.

Saccharin and glycerin are useful as substitutes for sugar. The former is eliminated unchanged, while the latter actually checks the formation of sugar (Ransom).

A strict nitrogenous and hydrocarbonaceous regimen has failed to benefit my patient during the time that she has been under my observation, although Osler, Cantani, and others declare that all cases are benefited by this *methodus medendi.* I believe, with Strümpell, that in many cases this remedy is worse than the disease itself, the "cure" affording them no relief, but merely distress.

Tyson highly approves the skim milk treatment introduced by A. Scott Donkin in 1868. Osler, however, does not think well of it.

Medicine.—Of drugs, codeine and arsenic have long been the sheet-anchors in this disease. Brunton, Flint, Foster, Smith, Byrd, Image and others testify as to the efficacy of the former. To be of any avail, however, it must be boldly pushed, as was shown by Pavy—one to five grains three times a day. It is said to check the waste, and it apparently exercises an influence over the central nerve-changes, thus being curative as well as palliative. It should be avoided in those cases which are controllable by diet.

Arsenic has been found useful by Johannsohn, Leube, and others. It is much in favor at the present time in the form of Clemen's solution of the arsenite of bromine. Its reputation is based upon the observation made by Salkowsky that glycogen is found diminished in the livers of animals poisoned with arsenic.

I placed my patient on codeine and the arsenite of bromine on November 26, employing gr. ss. of the former and gtt. iv. of the latter, repeated three times daily. As yet, though this line of treatment has been carefully followed out, in conjunction with a rigid regimen, no benefit has resulted.

Ergot, according to Tyson, stands next to codeine in efficiency. This writer does not believe that arsenic exercises any influence over the disease, but considers it useful as an adjuvant tonic. The arsenite of bromine has also given him negative results.

Carbolic acid, well-named by Unna "the opium of the skin," is an effective antidote to the often troublesome itching. The excessive thirst may be allayed by the use of acidulated or alkaline waters.

The chloride of gold and sodium, the salicylates, jumbul, antipyrine, strychnia, iodide of potassium, iodine, lactic acid, iodoform, cod-liver oil, nitroglycerin, the salts of lithium, and creosote are but a few of the drugs which have been employed in diabetes, each having its advocates. To quote Prof. J. A. McCorkle, "it has become an axiom in medicine that whenever a large number of remedies are recommended for the cure of a particular disease, it may be inferred that the proper management of that disease is still *sub judice.*"

Hygiene.—Mental excitement and worry have been suggested as possible causes of the disease, and it is certain that they almost invariably have a bad effect upon its course; hence, they are to be avoided. The general laws of health should be observed. The underwear should be of silk or flannel. The action of the skin should be promoted by baths, massage, and systematic and moderate exercise. Külz has shown that, *cæteris paribus*, increase of muscular activity increases the assimilation of sugar, its excretion thus being diminished.

The complex phenomena of diabetes will doubtless enlist the study of the best minds of the medical world for many years to come, and it is possible, even probable, that some master-mind will eventually elucidate them and point out the means whereby we may successfully combat this mysterious disease. In the meantime, the practitioner must confine himself within "the legitimate sphere of rational empiricism."

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VIN MARIANI AND THE OHIO STATE FOOD COMMISSION.

The Ohio Dairy and Food Commission has recently begun a vigorous attack upon the adulteration of foods and drugs in that State, and in six months has brought about ninety cases before the Courts. One of these cases was that against a prominent druggist of Cincinnati, for selling Vin Mariani as being a preparation below the standard required by the Ohio Pure Food Law. The Chemist of the Commission has, we are informed, since he made his report adverse to Vin Mariani, found that he was in error, and that the preparation is up to the standard and that its sale in Ohio is perfectly legitimate. The portion of the law bearing on the subject of food and drugs is as follows :

Section 1. That no person shall, within this State, manufacture for sale, offer for sale, or sell any drug or article of food which is adulterated, within the meaning of this act.

Section 3. An article shall be deemed to be adulterated within the meaning of this act :

(1) If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein. (2) If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other Pharmacopœia, or other standard work on materia medica, it differs materially from the standard of strength, quality, or purity laid down in such work. (3) If its strength, quality, or purity falls below the professed standard under which it is sold.

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EDITORIAL.

ASSEMBLYMAN GEORGE W. BRUSH, M.D.

No legislative body of the magnitude and importance of the Assembly of the State of New York can be considered as properly organized that has not among its members one or more representatives of the medical profession to whom can be referred for consideration matters pertaining to the public health. We congratulate the people that in Dr. George W. Brush, who has just been elected to represent the Seventh Assembly District, they have secured a man well fitted for this responsible position. To Dr. Brush the thanks of the community are due for this expression of his willingness to serve the public at what must be a great sacrifice to him.

◆

PROFESSOR A. H. BUCKMASTER, M.D.

The appointment of Dr. Buckmaster to the Chair of Gynæcology and Obstetrics in the University of Virginia is an honor in which Brooklynites feel that they have a share, for, although Dr. Buckmaster's residence has of late been in New York City, still his departure from Brooklyn is of so recent a date, that we claim him as one of us, and regard his stay in New York simply as a sojourn while on his way to Virginia, a sort of "stop-over," as railroad men would term it. That Prof. Buckmaster will fill the chair with ability, no one doubts who knows the man, and we wish him all the success he so richly deserves.

◆

J. L. ZABRISKIE, M.D.

Dr. J. L. Zabriskie has been appointed by Mayor Schieren a member of the Brooklyn Board of Education.

◆

J. FENIMORE COOPER IN BROOKLYN.

Some forty years or more ago a young practitioner was accosted near the foot of Carlton Ave., in this city, by a stranger who asked him if he happened to know a man by the name of Ned Myers who lived somewhere in the vicinity. It so happened that Myers was at that very moment under the professional care of the young doctor, and when this fact was made known to the stranger, he asked if perchance the doctor had ever read any of Cooper's novels; on receiving an affirmative answer, he said: "Well, young man, I am Cooper, and Ned Myers is the hero of 'Life Before the Mast.'" The doctor acted as guide to the lowly home of Myers and was witness to a most affectionate meeting between two who had as boys sailed the seas together, the great novelist and the poor sailor who was even then on his death-bed. It will interest our readers to know that the young doctor was Andrew Otterson.

◆

STATUE OF DR. J. MARION SIMS.

A statue of this distinguished surgeon was unveiled with impressive ceremonies in Bryant Park, New York, on October 20th, the address being delivered by Dr. George F. Shrady.

◆

AN INCIDENT.

A few weeks ago an eccentric-appearing individual entered the office of one of our most distinguished surgeons, who lives on the corner of two well-frequented streets, and said that he had come from the east end of Long Island to consult a physician whose address he was unable to find. When asked the name of the physician he responded that he could not at the moment recall that either. Then, pausing for a while, he turned to the doctor and said: "Well, how are you on worms on this corner, any way?"

◆

PROCEEDINGS OF SOCIETIES.

BROOKLYN GYNÆCOLOGICAL SOCIETY.

Meeting of February 2, 1894.

The President, Dr. Charles Jewett, in the Chair.

Dr. Jewett presented a diagram of the Murphy Breast Binder, which consists of a piece of muslin 15 inches wide by 40 inches long, cut to fit the breasts. The diagram serves as a convenient method of giving a pattern with instructions to a nurse, from which she can easily make and apply the binder to the breasts.

Dr. Charles Jewett presented a paper entitled "Remarks on Axis Traction," and exhibited his own and various other axis traction forceps.

Dr. Jewett also presented a paper on "Posture in Labor."

Discussion by Drs. Kortright, Butler, Chase.

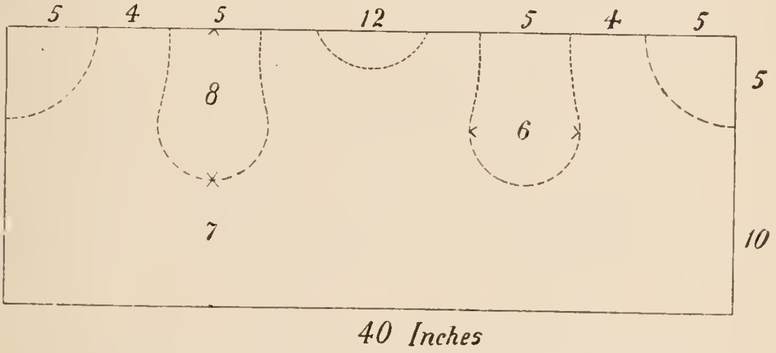
PRESENTATION OF SPECIMENS, INSTRUMENTS AND CASES.

Dr. Jewett reported a case of delivery under Dührssen's incisions. The subject of the operation was a woman of 19 years, a primipara, who was brought into the hospital suffering with nephritis, and in the ninth month of pregnancy, near term. She had a large amount of albumin in her urine, and although her condition improved somewhat within a few hours after admission, he did not think it safe to leave the patient longer undelivered, and commenced interference for the purpose of inducing labor. The woman, when she had taken a few drops of chloroform, became cyanotic, apparently from œdema of the lungs. He was compelled, therefore, to deliver without the use of chloroform. He had expected to deliver gradually by the usual method of inducing labor, but, under the circumstances, elected Dührssen's incisions.

With a pair of straight, strong scissors an incision was made in the anterior lip of the cervix to the vaginal junction, another on the posterior lip, and one on each side, to the same depth. The patient was delivered with the forceps with no particular difficulty, the orifice being large enough after the incisions to admit of easy extraction. The patient had a slight rise of temperature—100° F. —for a few days, but the larger portion of the time the temperature was good, and her recovery was entirely satisfactory. The delivery was rapid, and the perineum had to be sacrificed as well as the cervix. These injuries will be repaired before the patient leaves the hospital. Dr. Jewett had used the Dührssen method in two or three other cases. He does not think it is a very desirable operation, though it has been endorsed to some extent in Germany and in New York. The objection is that almost certainly the incisions will tear; how far the tear may go we cannot tell or control. In one of the cases where he did the operation the posterior incision tore into the uterus; in fact, there was an incomplete rupture of the uterus.

THE MURPHY BREAST BINDER.

Dr. Jewett: The object of this drawing is to show a convenient method of giving the pattern, with instructions, to the nurse for making a breast binder. The Murphy binder is a very simple and easily made one, and a very useful one for the purpose. The common difficulty is that the nurse does not know just how to make it, and if the doctor has not the details in his mind it is not easy to direct her. This diagram serves as a guide.



The bandage is of very great service in cases where the breasts are painfully engorged and particularly where the patient does not nurse and it is necessary to dry up the milk. The figure explains itself. The lines through which the cuts are to be made are indicated by the dotted lines on the diagram.

DISCUSSION.

Dr. Chase: Regarding the question of these incisions which you make in a rigid cervix, under such conditions where instantaneous delivery is needful, you think that an incision made anteriorly and posteriorly is not enough, that to lessen the liability of tear there should be lateral incisions as well?

Dr. Jewett: I think four incisions would diminish the danger of tearing. You open up the girdle of resistance more by four incisions than by two.

Dr. Chase: Is it your purpose to repair the perineum and cervix some weeks hence, or in the near future?

Dr. Jewett: Probably in a day or two; it is a matter of some eight days since the woman was delivered.

Dr. Chase: Was there any contra-indication to repairing the cervix then?

Dr. Jewett: There was; the patient had a very high pulse and rapid respiration, which had existed for some time. Her condition was bad, with no certainty that she would live at all. It is not Dührssen's practice to do the immediate suture. There is generally no objection to suturing directly after the incisions. The cervix is in better condition for suturing than after ordinary labor. After labor usually it is soft and flaccid, and there are two objections to repairing it at that time; first, that the sutures do not hold so well; second, the cervix is so soft and succulent that it is more exposed to sepsis. The principal objection after incisions is the usual one to interference within the passages after labor, which after all is insignificant if we take the proper precautions.

Dr. McNaughton: Could you not make a shorter incision half way up the cervix and then dilate from *without* instead of carrying the incision up so far and allowing the head to do the dilating?

Dr. Jewett: That could be done. As a dilator, however, the hand is more likely to lacerate than the head, and in the last stages of the dilatation the danger from the hand is the greater. The shorter incisions, therefore, I think would not be of any advantage.

There is always the theoretical danger of cutting the circular artery. This did not happen in the case reported, and we had no hæmorrhage more than from any cervical cut low down. This accident, in fact, has never happened in my experience.

Dr. J. M. VanCott, Jr., was elected an honorary member of the Society.

Meeting of May 4, 1894.

PRESENTATION OF SPECIMENS AND CASES.

Dr. A. J. C. Skene presented a specimen of a tube, with ovary in the last stage of chronic inflammation, a parovarian cyst also being present.

Discussed by Drs. Chase and Jewett.

Dr. J. W. Corcoran narrated the following history of a case of twin pregnancy—one intra-uterine, and the other, which had ruptured, extra-uterine—where twenty-four hours previously the patient had been supposed to be in good health, the patient succumbing from internal hæmorrhage.

TWIN PREGNANCY, ONE INTRA-UTERINE, AND THE OTHER RUPTURED EXTRA-UTERINE; DEATH FROM INTERNAL HÆMORRHAGE.

This patient was brought into the hospital on Wednesday evening in a state of collapse. The only history to be obtained was that this occurred twenty-four hours previously, when she was supposed to be in good health; when I arrived there she was moribund, and I only kept her alive by the energetic use of stimulants. Examination only showed she was pregnant; abdomen very tympanitic, largely swollen and the tumor barely perceptible and soft on one side of the uterus. I decided that operation was of no benefit, as she was evidently dying. At the post-mortem we found she had a twin pregnancy, one intra-uterine, and the other, which had ruptured, extra-uterine. I will submit the specimen at another meeting.

I saw the patient about 11 o'clock in the evening, and she died early the following morning. She was given ether preparatory to laparotomy, but the pulse entirely disappeared, and any interference at all would have been fatal. I should judge it was past the third month of gestation. All but the extra-uterine fœtus was found; the intra-uterine fœtus was larger.

Dr. Skene thought the difference in size of the embryo in the tube and that in the uterus would suggest that they were of different ages.

Dr. Corcoran thought the difficulty of growth outside the uterus might account for that—a just comparison could not be made.

Dr. Skene raised the question as to whether it was common for the ovum in a tubal pregnancy to die, and then rupture. In this case the smallness of the extra-uterine embryo and its being somewhat macerated would suggest it had died before rupture, but he did not think there were a sufficient number of well observed cases to settle the question definitely as to the tendency to rupture after the death of the ovum.

Dr. Jewett thought hæmorrhage might occur into the fruit sac after the death of the ovum or during the death, and lead to rupture.

He believed pelvic hæmorrhages did occur as a cause of death where there was no gestation. It was a question whether they came from the tube in such cases.

Dr. Skene thought the old-fashioned pelvic hæmatocele did exist occasionally; that every case of pelvic hæmorrhage was not due to rupture of a tubal pregnancy; that there were still cases where there was no gestation at all, but only a ruptured vessel and well-marked hæmatocele. He referred to a recent case where operation was performed and a bleeding point found, but no ovum or anything to suggest pregnancy. He had seen veins so thin walled and so distended that he could readily see how they might rupture and bleed profusely where there was no pregnancy. He had frequently called attention to varicose veins of the broad ligament; that they were quite common was evidenced by the fact that Dr. Dudley, of New York, operated specially for the relief of them. He believed they did rupture occasionally and resulted in a pelvic hæmatocele which formed more slowly than if an artery of any size should rupture, but which bled sufficiently to give a dangerous hæmatocele.

He believed such cases were still occurring, though since so much has been known about the rupture of tubal pregnancies the temptation has been to almost believe that they were always the cause of pelvic hæmatocele. He did not believe that, however, though it is by far the most common cause.

Dr. J. L. Kortright related the history of a case of induced labor at the eighth month, the patient suffering from nephritis and exophthalmic goitre. She had a general convulsion after delivery and died in a few hours from shock.

Discussed by Drs. Skene, Chase and Jewett.

Dr. W. B. Chase read the history of a case of pelvic abscess, which was discussed by Drs. Jewett and Skene.

In closing the discussion Dr. Chase said: The aspirator used was of medium size; the fluid was of the natural color, thick, with some odor. The lower portion of the abscess wall was on a level with the cervix, presuming the uterus to be in normal position, and it filled Douglass' cul-de-sac. I believe this pus was not in the tube. On the subsequent examination, which took place six weeks or two months later, I could find no evidence of disease of the pelvic organs except an old cervical laceration, and it had left no results which indicated the necessity of repair.

An accumulation of blood in the peritoneal cavity would not push the uterus forward in that way. It was sub-peritoneal, in the cellular structure between the posterior vaginal wall and the rectum. It was impossible to conceive that there was blood there, and yet, taking the history of the case, the rational conclusion from the clinical symptoms alone perhaps would indicate blood rather than pus.

On the morning and the evening of the day on which the aspiration was performed the patient's temperature was nearly normal.

Dr. Jewett related the history of a case of separation of the symphysis pubis after a perfectly normal labor.. He revivified the two surfaces of the joint, applied canvas binder and rubber adhesive straps and kept the patient in bed three weeks, at the end of which time there was a considerable degree of union; but the final result remains yet to be determined. The following is the history

SEPARATION OF THE SYMPHYSIS PUBIS.

Dr. Jewett related the following case, which had been referred to him from another State, owing to separation of the symphysis pubis. The patient, a multipara, was delivered in December last. The labor was perfectly normal, requiring no artificial interference. On getting up after the usual period in bed the pubic bones were found to be freely movable. A pelvic bandage was worn for a time, with rest in bed, but with no satisfactory result. At my first examination, about three months after labor, there was marked looseness of the symphysis. The patient walked with difficulty and the joint cracked audibly on turning in bed. No active interference was desired if it could be avoided. I therefore first applied a firm canvas binder with three straps drawn as tight as a trunk strap could be fastened, and enjoined rest in bed for three weeks. Under the canvas I applied rubber adhesive straps as practiced after symphyseotomy. The plaster strapping has the advantage that it enables the attendants to take off the canvas binder for bathing the body or for evacuation of the bowels or bladder. It serves to steady the joint while the other dressing is removed. The rubber plaster, however, irritated the skin and was replaced with lead plaster, which I have generally found much more satisfactory in point of comfort, though somewhat less adhesive.

At the end of three weeks the crepitus had almost wholly disappeared, but when the bandage was removed there was still some mobility of the pubic bones. The patient then accepted the suggestion which I had made primarily, that I should vivify the two surfaces of the joint and retain again by a binder. That I did yesterday. With an instrument shaped like a shoemaker's awl, but with a little less curvature, I vivified the two surfaces of the joint. I made an incision in the abdominal wall, just above the joint, in the usual position of the symphyseotomy incision. With the finger in the wound I was able to identify the location of the symphysis. I passed the scarificator between the bones, and applied it freely to both joint surfaces, using care not to invade the prevesical space. The canvas binder was then reapplied.

At the time of correcting the foregoing notes for the printer the joint was firmly consolidated. The pelvic bandage was continued for three weeks with rest in bed. At the end of that period absolutely no mobility of the joint could be detected.

Dr. L. G. Langstaff presented the paper of the evening, entitled "The History of an Unsuccessful Case of Lacerated Cervix and Perineum, with Acute Hydro-salpinx, with an Inquiry into the Cause of Failure to Cure."

Meeting of June 1, 1894.

PRESENTATION OF CASES.

Dr. Skene presented the following cases:

Removal of fibro-cyst of the uterus, and ovarian cystoma.

Epithelioma of the uterus, removed by vaginal hysterectomy, complete suppression of the urine ensuing for 135 hours, when the kidneys resumed their function and patient recovered.

Chronic inflammation of the ovaries, with parovarian cyst; abdominal section and removal of tubes and ovaries. (Specimen submitted.)

The above cases were discussed by Drs. Raymond, Jewett, McNaughton, Chase, Hyde and Maddren.

Dr. W. H. Skene, on behalf of Dr. L. G. Baldwin, presented the specimen and read the following history of a case of sarcoma of the uterus removed by abdominal hysterectomy.

Mrs. M., aged thirty, married seven years; two children, last two years ago; two abortions, last in October, 1893. Menstrual flow profuse, and every two weeks since last abortion. First seen in the early part of May, and was curetted on May 5th. Dr. W. C. Gardner examined specimen and made diagnosis of large round-celled sarcoma. Hysterectomy advised and accepted; operation on Wednesday: so far patient has done well. Especially interesting is the early diagnosis, and in the event of recovery, prognosis should be good.

WILLIAM H. SKENE, M.D.,
Secretary.

MEDICAL SOCIETY COUNTY OF KINGS.

Meeting of October 16, 1894.

The President, Dr. Geo. McNaughton, in the chair.

There were about 200 members present.

The minutes of the previous meeting were read and approved.

The Council reported favorably on the following applications and recommended their election to membership :

Dr. Henry F. Adams. P. & S., N. Y., 1890.
Dr. Wm. B. Brinsmade, P. & S., N. Y., 1892.
Dr. Edson S. Chick, L. I. C. H., 1894.
Dr. A. D. Vance, L. I. C. H., 1894.
Dr. Henry A. Bishop, P. & S., N. Y., 1869.
Dr. John C. Colgan, L. I. C. H., 1882.
Dr. Burdett O'Connor. L. I. C. H., 1894.
Dr. Henry F. C. Muller, Albany, N. Y., 1887.
Dr. D. E. Warren, P. & S., Baltimore, 1892.

The following having been regularly proposed and favorably reported upon by Council were declared elected to active membership : Dr. Earl H. Mayne, Dr. Jno. T. Gibbons, Dr. J. A. Somers.

The following propositions for membership were presented :

Dr. R. H. Sullivan, 584 Franklin Ave., N. Y. Univ., 1883 ; proposed by Dr. Geo. A. Evans ; Dr. S. H. Benton.

Dr. W. H. Biggam, Dean St. cor. Nostrand Ave., Coll. P. & S., N. Y., 1881 ; proposed by Dr. Geo. A. Evans ; Dr. S. H. Benton.

Dr. Alonzo S. Treadwell, 107 McDonough St., L. I. C. H., 1893; proposed by Dr. J. T. Conkling ; Dr. Henry Conkling.

Dr. J. C. Search, St. John's Hospital, Johns Hopkins Univ., 1892; proposed by Dr. W. B. Chase; Dr. H. W. Rand.

Dr. Henry D. Hawxhurst, 736 La Fayette Ave., Bellevue, 1894; proposed by Dr. S. H. Benton; Dr. W. B. Chase.

Dr. Geo. Chappell Crawford, 545 Nostrand Ave., L. I. C. H., 1894; proposed by Dr. Wm. C. Braislin; Dr. Wm. Browning.

Dr. Wm. P. Pool, L. I. C. Hospital, L. I. C. H., 1894; proposed by Dr. Geo. McNaughton; Dr. Ernest Palmer.

Dr. Clarence Reginald Hyde, 215 Shermerhorn St., L. I. C. H., 1894; proposed by Dr. Geo. McNaughton; Dr. J. A. McCorkle.

Dr. J. C. Cardwell, 475 Halsey St., N. Y. Univ., 1888 ; proposed by Dr. F. Weisbrod ; Dr. C. N. Cox.

Dr. Ira Trasey, Kings Co. Insane Asylum, P. & S., N. Y., 1882; proposed by Dr. J. S. Duryea ; Dr. C. F. Barber.

Dr. Carl Mueller, 132 Ewen St., Bellevue, 1893; proposed by Dr. F. Weisbrod ; Dr. C. N. Cox.

Dr. Robert A. Black, 106 Johnson St., P. & S., N. Y., 1883; proposed by Dr. Geo. McNaughton; Dr. David Myerle.

Dr. Hardy T. Rhodes, Kings Co. Hospital, L. I. C. H., 1893; proposed by Dr. J. T. Duryea; Dr. C. F. Barber.

Dr. Chas. A. H. de Szigethy, 157 Clinton St., Univ. of Giessen, Germany, 1867; proposed by Dr. J. H. Raymond; Dr. Geo. McNaughton.

Dr. Wm. Thomas Campbell, 127 Lafayette Ave., L. I. C. H., 1892; proposed by Dr. Reuben Jeffery; Dr. Geo. McNaughton.

SCIENTIFIC BUSINESS.

Dr. Reuben Jeffery presented a paper entitled, "The Pathology of the Salpingo-pharyngeus Muscle."

Discussed by Drs. Cox, Wooley, John Shepard, and Sherwell.

Dr. J. B. Mattison presented a paper on "Cocaine Poisoning." Discussed by Drs. J. W. Stickler and Dodge, of Orange, N. J., and Drs. Mosher, Rand, Lucy Hall Brown, Jeffery, Woolley and Evans.

The Chair thanked Drs. Stickler and Dodge, on behalf of the Society for their interesting discussion of this paper.

Dr. E. H. Bartley presented specimens of the National Formulary Compounded by a Committee representing the Kings County Pharmaceutical Society.

Discussed by Dr. Hunt, Mr. Stevens, Dr. Brundage and Mr- De Forrest.

REPORTS OF COMMITTEES.

The Committee on New Building, Committee on By-Laws, and Committee on Fee Bill each reported progress.

There being no further business, on motion the meeting adjourned.

David Myerle, M. D.
Secretary.

BROOKLYN SURGICAL SOCIETY.

Abstract of Proceedings, December 8, 1893, to June 7, 1894.

LYMPHO-SARCOMA OF AXILLÆ.

F. W. Wunderlich, President in the chair.

Dr. Pilcher presented an adult male patient who came under his observation in the beginning of May, or the last of April, 1893, suffering from a glandular enlargement in either axilla, while at the same time there was considerable general cachexia which had been coming on insidiously for a length of time that was not ascertainable.

He entered the Methodist Hospital and was subjected to operation for the removal of the axillary growths. Multiple growths were found in both axillæ. They were thoroughly cleaned out, the enlarged glands on one side being traced up under the clavicle.

The operation upon both sides was performed at the same time and was conducted without unpleasant accident to a safe conclusion. Primary union in both wounds was secured, and he returned home in a few days.

He returns now with not only recurrence in the axillæ, but also with multiple large growths in various other portions of the body.

The report of the pathologist on the original growths that were removed, was, that they were sarcomatous in their nature, that is to say the case was one of lympho-sarcoma.

The diffusion of the growths throughout a wide area of lymphatic structures, is evident from the condition which he presents to us to-day. Dr. Pilcher presented him principally for the bearing that the case may have upon the use of medicinal measures for the holding in check, or, if possible, the relief of the conditions that are present.

Now on either side are multiple growths in the neck. These masses on the left side have not as yet coalesced ; they have coalesced upon the right side. The scars of the former operation are visible and it is possible to trace glandular enlargements in the axillæ, although they were entirely cleared of them in the Spring.

A report will be made to the Society, at a future time, upon the results of whatever treatment may be advised to pursue in his case.

In May last, at the time of the original operation upon him, there were no perceptible glandular enlargements, other than those that were found in the axilla.

Note : The patient died three weeks after appearing before the Society. Death was due to asthenia.

VESICAL CALCULUS—SUPRAPUBIC CYSTOTOMY—PRIMARY UNION OF BLADDER WOUND AFTER SUTURE.

Dr. Pilcher presented a man, about sixty years of age, who was recently admitted to the Methodist Hospital, suffering from symptoms of stone in the bladder.

The existence of a calculus was determined by the usual examination. From the fact that there was found also to be a deficient amount of urea in the urine that was secreted, he was unwilling to submit him to the prolonged effects of an anæsthetic, and therefore decided to submit him to supra-pubic section, instead of the longer method of crushing.

He availed himself, for the purpose of bringing the bladder up above the symphysis, of the device to which attention was called by Dr. Bristow, *i.e.*, inflating the bladder with air, and doing away with the use of the colpeurynter.

The calculus that was removed, was a moderate sized uric acid calculus. At the conclusion of the operation, the wound in the bladder was sutured and a catheter *à démeure* was placed through the urethra into the bladder. The superficial portion of the wound was left open, and thoroughly tamponed with iodoform gauze. There was no leakage from the wound. The iodoform tampon was left in a week, at which time a suture was applied, and now at the end of eight days, from the time of this superficial suturing, and two weeks after the primary operation, the patient is presented, entirely well.

LARGE PSEUDO-DIVERTICULUM OF THE DUODENUM.

Dr. Pilcher presented a specimen, with the following history: The young man seventeen years of age had been sick for twelve weeks before his admission to the Methodist Hospital, with irregular fever, pain in his abdomen, accompanied with considerable tendency to tympanites and some constipation. He had emaciated much, and at one time, there was a very pronounced tumor in the right inguinal region.

Upon admission to the hospital, while he was emaciated and anæmic, and there was some diffused tenderness over the abdomen, it was impossible to detect any tumor. His temperature was slightly elevated, but upon being subjected to the simple treatment of rest in bed, it fell to a normal curve.

The case then seeming to have no surgical aspect, but to be one of anæmia, he was transferred to the medical side of the house, where he remained some two weeks. During the last of these two weeks, his old symptoms began to renew, a hectic curve was again developed with increased tenderness in the abdomen, and finally the existence of a tumor lying in the median line of the abdomen was perceptible.

He was growing rapidly weaker, and the condition was such as to cause him to be again transferred to the surgical side of the house, and he was at once subjected to an abdominal section.

Upon opening the abdomen, in the middle line, there was found a tumor lying along and over the bodies of the vertebræ, reaching up to the region of the duodenum, while below it extended to the promontory of the sacrum, and overhung the inlet of the pelvis. It dimly fluctuated, but the character of it was very uncertain, as far as could be determined from the examination which it was prudent to make at first.

The examining hand passed upward to the liver, and over to the kidneys upon either side, and was sufficient to show apparently, that it was not connected to either of those organs. There was an adhesion of the omentum to it, which was freed by ligature and the rest of the omentum tucked up out of the way, and aside from that, there were no inflammatory complications, except in the right iliac region when firm adhesions to the ileum and cæcum were present.

During examination, it gave way at its most prominent point, and some pus exuded. Enlarging this aperture, there was evacuated from it a considerable quantity of brownish, not very offensive pus. The finger then introduced into the cavity, passed downwards, underneath a thick wall covering, as far down as the promontory of the sacrum, and in the lower part of it, there was found material, which upon being fished out, was found to be ingesta; there was an apple seed, and a grape seed and a piece of an apple, and what looked like turnip, in the bottom of the sac. And the finger passing upward toward the duodemma, moved unrestrainedly as far as the finger could reach. This sac was cleansed, the general peritoneal cavity being protected by tampons, and finally drainage tubes were passed upwards and downwards and outwards, while other gauze tampons were inserted to protect and cover the whole field as much as possible, and the wound partially closed.

The young man lived for just forty-eight hours; he gradually grew weaker and finally died, there having been a free amount of discharge, which very quickly became biliary in its character; milk, when it was swallowed by the patient, appeared likewise through the opening, demonstrating that this sac, which had been opened into, communicated with the alimentary canal at some point high up in its course, and from its direction, from the appearance of the undigested food within it, it seemed, that it communicated with that portion of the duodenum, that passed behind the peritoneum. The specimen which was removed, is the one presented to the society, and, as far as the knowledge of the reporter, is absolutely unique in its character. It is a thick-walled sac, whose cavity held about six ounces. At its upper part it broadened, and across the posterior surface of this part is traceable a band of normal mucous membrane, about one inch in width, which was continuous at either lateral angle with the proper intestinal canal. At the right upper horn the descending portion of the duodenum opened directly into the sac, pouting into it in a manner resembling the termination of the ileum at the ileo-cæcal junction. Just within the intact duodenum appears the papilla marking the opening of the common choledoch-duct. The sac thus formed and related was a veritable interruption in the continuity of the intestinal canal, being a large pocket or diverticulum into which all the ingesta transmitted by the stomach, together with the bile, was discharged by the duodenum on the one side, and from which it had exit on the other side into the jejunum. Minute examination of the innermost layer of the sac wall showed it to be composed purely of inflammatory connective tissue except along the limited portion described above where the strip of mucous membrane is still visible. The line of demarcation between the mucous membrane and the inflammatory connective tissue is very sharp and well defined. At certain points, the sac wall is much thinner than at others. It is evident that a rupture at its apex, near the cæcum, had been threatened before his admission to the hospital and that it had been averted for the time by an adhesive peritonitis which had caused the ileum and cæcum to become adherent to it.

MULTIPLE CONGENITAL DEFORMITIES.

Dr. Rand presented a baby patient whom he had seen with Dr. Jos. F. Colgan. The child was the third of its parents, so far as I know healthy and without deformities. The other two children are well formed and well nourished. This was a breech case and the doctor succeeded in delivering the child only after great difficulty. During delivery the right femur was broken ; and that was the only lesion discovered, except some contusions.

The only other case of deformity in the family is that of an uncle on the father's side, who has congenital talipes.

When first seen this baby was lying on his back with the upper extremities lying passive against the side, the fingers and thumbs flexed upon the palm, the wrists flexed and the forearms pronated. The elbows were stiff, and almost immovable. The lower extremities stood up straight at right angles to the body, the knees being rigid. Considerable lateral motion of what ought to be the knee-joints was permissible. The patellæ could not be made out. The feet presented marked equino-varus.

While going under chloroform the child cried lustily, and moved his trunk and both lower extremities; but the upper extremities remained passive. With the left lower extremity he kept beating the air, the right moving less on account of the broken femur.

Complete chloroform anæsthesia demonstrated the fact that the joints were abnormal and markedly rigid.

Heredity may play some part in this case, but it does not seem as if any of the theories advanced in explanation of club-foot are sufficient to account for the conditions here.

In regard to the right femur the position of the limbs has rendered it almost impossible to dress the fracture. The doctor was advised to keep the limbs bandaged together as well as he could, so as to make a splint of the other sound femur.

The motion of the shoulder joint seemed normal. The hip joint permitted considerable extension of the thigh, but not so as to bring the lower extremities upon the same plane as the trunk.

Dr. Fowler said that the question of the etiology of the deformity here is one of very great interest, and one that perhaps may have a practical bearing as well. If this condition is due to adhesions within the amnion, and not to a central spinal lesion, the question of the attempt at early restoration, in order that the extensors may have an opportunity to contract was indicated. If these conditions are due simply to mal-nutrition *in utero*, these attempts would be justifiable in so far as the child's tissues would bear the pressure of the necessary appliances, and later on perhaps the application of some of the methods which are now so frequently performed in these cases of permanently shortened tendons.

And even if it be a central lesion, there can be very little gained by permitting them to remain in their present condition.

The case is one of very great interest. Mere speculation as to etiology would be of very little benefit to us. The suggestion occured to him that even comparatively early operative interference in a case of both feet and hands would be preferable to permitting the present condition to continue for a great length of time.

MYOFIBROMA OF UTERUS.

Dr. Pilcher presented a fresh specimen of a greatly deformed uterus removed the day before, being of particular interest on account of the mass of fibromata developed from the cervix, and from the junction of the cervix with the body. The greater portion of this mass was sub-peritoneal and within the folds of the broad ligament.

He presented it particularly as an illustration of the facility with which, with the present methods of technique, such deep lying tumors can be removed. The uterus having been exposed after the usual manner, the patient being in the position of Trendelenberg and the tumor having been seized and brought out through the opening, and an incision having been made through the peritoneum anteriorly from one broad ligament to the other, it was at once possible to enucleate the tumor mass from the bladder and to come down to the vaginal insertion on either side. Then a ligature was passed about the uterine vessels just as they left the side of the vagina, then the uterus being drawn over forward a similar incision was made from broad ligament to broad ligament behind, and the posterior flap of the peritoneum was peeled off from it.

There was then left simply the upper portion of the broad ligament on either side to be attended to. Two ligatures on either side cut off the circulation from the lateral walls of the pelvis, and the whole tumor was now cut off from vascular support, and with a few snips of the scissors was easily taken out. There was but one small arteriole in the vagina that needed the application of a suture for its control, and then the two flaps of the peritoneum were sutured over the whole extent, and then the whole peritoneal cavity was shut off from the operating field.

Previous to this suturing an iodoform bandage was passed down through the opening in the vagina and the upper part of it placed at the upper vaginal opening, for drainage.

This growth was removed from a woman forty-nine years of age. She began to suffer from signs of fibromatous development 12 years ago. She has been a sufferer from profuse hæmorrhages throughout that time from this tumor, and some two months ago was received into the Methodist Hospital in a state of great anæmia and profound nervous depression. By means of curetting the cavity of the uterus the tendency to hæmorrhage was temporarily checked ; and by suitable treatment since then she was built up to that point where I felt her condition was such as would render it prudent to attempt the removal of the tumor itself. It was done day before yesterday. She bore the operation perfectly well, sustained no shock after it and thus far her course has been eminently satisfactory.

Note : Her further convalescence was attended by no drawback.

OVARIAN TUMORS.

Dr. Wackerhagen presented the following clinical history: Patient aged eighteen years was presented at my office, by her mother December 10, 1892. She complained of enlargement of the abdomen which had been increasing in size for a period of two years. The abdominal walls seemed to be distended to their utmost capacity. The diagnosis of ovarian tumor was made and confirmed by Dr. Charles Jewett at a subsequent examination.

An operation for its removal was advised, and performed on the 15th. The tumor composed of three cysts, had its origin from the left ovary, it weighed 35 pounds. There were very slight adhesions.

There was nothing eventful in the course of this recovery. Patient only slightly nauseated from the effects of ether which was relieved by broken ice. Highest temperature 100° at 3 A.M. morning of the operation, pulse 110 at this time. On the second day pulse and temperature normal, 1-10 gr. doses of calomel were administered on the second day until two grains had been taken. On the third day as the bowels were not moving satisfactorily, teaspoonful doses of Rochelle Salts were given once or twice daily. Sutures were removed on the tenth day. Patient sat up, and was out of bed on the twentieth day.

This case was of special interest to him as he was physician in attendance at the birth of the patient.

RENAL CALCULUS.

Dr. Rand presented a renal calculus removed from the kidney of a boy fourteen years of age, some six weeks since. The boy has made an uneventful recovery and is around doing his Christmas shopping. This calculus was removed by the ordinary incision and weighs 24 grains. It was found in the pelvis. The boy had been carrying that around for some years and had suffered severe pain at times for the last two years.

VESICAL CALCULUS — SUPRAPUBIC SECTION AFTER DISTENSION OF BLADDER WITH AIR.

Dr. Pilcher presented a large vesical calculus, more particularly for the purpose of emphasizing the value of the dilatation of the bladder by air in facilitating the suprapubic section of the bladder.

This calculus was removed from the bladder of a man some seventy years of age, and, as a preliminary to the operation, the bladder was distended with air as much as it was possible to distend it, the bladder being very greatly hypertrophied as to its walls, and in a state of very strong contraction. No rectal colpeurynter whatever was used. The experience of the reporter in this case with distension by air was equally good with those which he had previously reported to the Society. He considered the use of air-distension of the bladder as a very decided improvement in the technique of suprapubic cystotomy.

CHRONIC APPENDICITIS—ILEO-APPENDICAL FISTULA.

Dr. Pilcher presented an appendix vermiformis recently removed by operation, the history of which was as follows : The patient, a man thirty-three years of age, in prime health, three years ago was suddenly attacked by a severe pain in the abdomen, accompanied with vomiting, which, after being very severe for a few hours, abated and the attack passed away. One year later he had a similar attack. About six months later, in August last, he had a third attack which was accompanied with some diarrhœa. It subsided again after a few hours and he soon regained his usual health, but about six weeks later, in September, he had another attack which likewise lasted for a few hours and then gradually subsided and he returned to his usual avocations. But about six weeks later he had another attack which developed into an illness that confined him to his bed some six weeks, the attack being accompanied with pain and tenderness, more pronounced in the right side of the abdomen, but radiating over the whole abdomen, and later, after a week or two, becoming much more marked in the hypo-gastric region and leaning to the left side. Under the use of fomentations and opiates, he gradually convalesced until at the end of these weeks which I have mentioned he was able to be up and out of bed, and then came to the Methodist Hospital for further examination and for treatment, and, if it seemed best, to submit to any operative interference that might be required for his restoration to health, for he was satisfied that the recurrence of these attacks, becoming more frequent and more severe, indicated some condition which was of a serious and threatening character. Accordingly he was submitted to abdominal section. The cæcum being lifted up its under surface was found to be somewhat congested and the appendix swollen, extending down along the border of the entrance to the true pelvis, at which point it was adherent to the parietal peritoneum, while on the other side it was adherent to the ileum. The appendix was easily loosened from its attachments to the wall of the pelvis, and then with the loop of the ileum it was brought up so that it became more easily accessible, and the separation of the appendix from the ileum was proceeded with. In doing so as the adhesions were separated the following condition of affairs was found to be present. A small abscess cavity between the ileum and the appendix, a perforation of the appendix existing at this point communicating with the cavity, and then from this cavity an opening into the ileum. While, as was demonstrated upon the removal of the appendix, by inflammatory processes the lower half of the appendix had been shut off so that the tip was converted into an abscess. These attachments were finally all severed and the appendix was tied off. Up to that moment the existence of the opening into the ileum had not been demonstrated. But after the removal of the appendix proper some of the fæcal contents were found to have meanwhile oozed out and to be present in the field of operation. Upon further examination then an opening running in a somewhat oblique manner toward the ileocæcal valve was demonstrated to exist. After cleansing the parts thoroughly this was now covered in by sutures to bring the peritoneal folds over, the Lembert's stitch being used, and finally the aperture into the bowel was believed to have been closed. That having been done and the toilet of the peritoneal cavity having been done through copious irrigation with boro-salicylic acid solution, two iodoform gauze drains were placed in the lower angle of the wound, and the wound was closed. The subsequent course of the case was perfectly satisfactory.

Dr. Fowler presented an ovarian cystoma, the size of an English-walnut, together with the Fallopian tube from the right side and an ovary and Fallopian tube from the left side of a patient which he had removed the day before yesterday by abdominal section. Dr. Fowler said the young lady for several years past had been suffering from symptoms of disturbed menstruation, and was treated by a practitioner of this city for the greater portion of that time for a retroverted uterus. The treatment consisted in the introduction of a uterine sound, rotating the uterus into position and tamponing behind it with cotton or wool tampons. About three months ago while on a visit to the country and after a menstruation which was somewhat disturbed and which occurred somewhat prematurely and was accompanied by an unusual amount of pain, she developed severe pains which were attributed by her physician in the country to pelvic peritonitis. Finally an abscess formed which partially emptied itself through the rectum and vagina. After eight weeks of re-accumulation of pus and another discharge, both from the rectum and vagina, I was asked to visit her ; she was seen for me by Dr. Delatour. She was afterwards brought to the Methodist Episcopal Hospital, before the abdomen was opened. The following condition was found. The right Fallopian tube was empty but its fimbriated extremity was surrounded by adhesions. A communication existed between the vaginal and the rectal cavities, and what was left of the lumen of the right Fallopian tube.

The diseased tube, together with its accompanying ovary, was removed. Upon the right side a true ovarian cystoma was found, which in connection with the tube was likewise removed. The case has gone on uninterruptedly to recovery.

APPENDIX VERMIFORMIS.

Dr. Fowler presented a specimen of an appendix vermiformis which was recently removed from a young man who gave the following history. On last Saturday evening, four days ago, he was taken suddenly ill, with pain referred to the right iliac fossa. Vomiting came on next day, and, as he expressed it, he "vomited all day." He was seen by his family physician the next day and enough opium given to quiet the pain; a diagnosis of appendicitis was made .The temperature at no time was above 100.5° and his pulse up to the time he was seen yesterday afternoon, was 100. Yesterday it reached 120. Tenderness along the line of Poupart's ligament was well marked. The point of tenderness was rather low down, it was at least an inch and a half from McBurney's point. He was taken to St. Mary's hospital in Dr. MacNaughton's invalid coach and the abdomen opened by the oblique incision. The omentum was found wrapped over the anterior surface of the cæcum and reaching down somewhat on the outer edge. This, upon being parted and turned back, gave rise to an escape of about an ounce of rather thick pus. This being wiped away the appendix was sought for and its proximal extremity found extending almost directly upward for about three inches, when it turned at a sharp angle and passed directly downward. There were gangrene and perforation at the point of angulation : the appendix was almost sloughed away at this point. The adhesions which shut this off from the general peritoneal cavity ceased at the point of angulation and in his attempt to lift up the appendix in order to isolate it he found free coils of intestine, and it became necessary to ligate the appendix at this point and remove the diseased portion. It would have been almost impossible to have removed the remainder of the appendix without having taken an unwarrantable risk to the man's life. At the point where the adhesions were broken down iodoform wick-drains were placed and the abdominal wound closed with the exception of perhaps three quarters of an inch. The case is presented from the fact that the particular condition present is rather rarely found. Curved conditions are frequently seen but he never saw an appendix in such an angulated condition as this. It would seem that this form of appendix was specially liable to injury in connection with an overloading of the colon. The pressure of a large accumulation of fæces would force the appendix up against the lateral abdominal wall and interefere very seriously with its nutrition at this point. Nothing more than a little mass of soft fecal matter was found in this appendix. The angulation, and possibly the abrasion of the mucous membrane or a necrotic condition of the wall, led to infection from some of the micro-organisms which infest the large intestine and which find their way to the cavity of the appendix itself.

The interesting question occurs as to whether it would not be justifiable to strongly advise the removal of the rest of the appendix as a secondary operative procedure. He had so advised patients in cases where the conditions present at the first operation were such as to render it unsafe to remove the entire organ.

DIFFUSE OSTEOMYELITIS OF FEMUR, WITH MULTIPLE SEQUESTRA.

Dr. Pilcher presented a young man, eighteen years of age, who had enjoyed good health until ten years ago, when, without any apparent cause, he began to suffer from pain in his hip. About one year later his thigh became swollen and tender and finally suppurated, and discharged spontaneously upon the inner side. Some few months later it again gathered and broke in the popliteal space. These sinuses refused to heal and have been discharging until the time he presented himself at the Methodist Hospital in November last. When he presented himself there were two sinuses that were then discharging and marks of others. One was in the middle of the popliteal space and the other on the inner side of the great trochanter. He was submitted to an operation on November 22d at which time an incision was made on the outside of the thigh extending from a point above the upper sinus half way down the thigh. The outer side of the femur was exposed through the incision and the sinus itself was found passing down to an opening in the femur at the base of the great trochanter. It was enlarged upwards and downwards with mallet and chisel, upwards into the entrance of the trochanter as far as the disease was found to extend, until healthy bone tissue was reached, the medullary canal was fully exposed, and along within it were found to lie a series of bony sequestra. The outer wall of the femur was gradually chiselled away until the entire cavity of the medullary canal had been exposed half way down the femur; at this point the more pronouncd evidence of disease ceased, yet it was quite evident that the lower portion of the femur must be subject to a similar disease. The exposure of this canal over this six inches of space was necessarily a somewhat tedious affair, and it was thought best to bring the operation to a close when the middle half of the bone had been reached. Thorough curetting and chiselling of the canal was done so as to produce a simple gutter upon the outside of the bone, which was to a very considerable degree converted into a sterile space, and then the soft tissues were inverted into this gutter. The patient reacted well from this operation and at the end of two weeks he was again submitted to operation for the clearing out of disease in the lower half of the bone. The disease thus reached throughout the whole region from the shaft of the femur to the epiphyseal line below. No attempt was made to reach the opening of the lower sinus into the bone, for it passed directly through the centre of the popliteal space, and the vessels and nerves of the popliteal space were undoubtedly well matted together. But the bone was at once attacked from the outside with gouge and mallet until the medullary canal was reached, sequestra were at once exposed to view. Then by raising up the periosteum and gnawing away the bone, the opening of the sinus in the popliteal space was finally reached, and all of the parts that were involved in necrosis were removed. The exposure of the cavity from the medullary canal upward was continued until the point at which the previous operation had been arrested was reached, so that the whole medullary canal was opened and converted into a gutter, and its contents cleaned out. This having been done sutures were again applied. It may be said that in this second operation numbers of enlarged vessels were cut, the hæmorrhage being restrained by the application of the elastic bandage. One larger one was tied by catgut, and the control of hæmorrhage from other vessels was believed to be secured by proper application of compressing pads and bandages before the removal of the elastic bandage. Upon the removal of the elastic bandage a very copious hæmorrhage was found to be taking place from the upper angle of the wound. This being exposed was found to be easily controlled by pressure applied to either side of the wound, and, without re-opening the wound, suitable pads for compressing were applied upon the integument, and a bandage being applied no further hæmorrhage took place. The patient after this most extensive operation, too extensive to be carried on at one sitting, has convalesced without drawback and now five weeks since the last operation was done is about to return to his home in New Jersey.

Dr. Rand presented a specimen of spontaneous amputation of appendix in order to introduce the history of a case having some points of interest. The specimen is an appendix, which was amputated without the aid of the surgeon.

In the latter part of January he was called to see a case with a history of having been seized with a generalized abdominal pain five days previously, soon becoming localized in the right iliac region, and with the other usual symptoms of acute appendicitis. There was a large oblong tumor extending well over towards the border of the rectus muscle. A part of the history that rendered diagnosis somewhat uncertain, was, that for some months he had been losing flesh ; had lost 60 pounds in nine months ; had had frequent attacks of pain on the left side, and had been troubled with obstinate constipation. He had also had copious discharges of mucus and blood from the bowels. All this made him uncertain whether he had an acute appendicitis that had gone on to suppuration or some other disease, possibly carcinoma, that had caused an acute localized peritonitis. He operated on him, making an oblique incision, going into an abscess cavity with walls made up of coils of intestine. At the upper angle of the wound he entered the free peritoneal cavity, The abscess cavity contained about six ounces of very offensive pus.

The appendix had undergone amputation at or near its base, and lay against the anterior wall of the abscess cavity. It was washed out during irrigation, which he resorted to in this case, because the walls of the abscess were fairly firm and regular, and the free peritoneal cavity had been opened. This latter opening was of course kept carefully closed by the fingers of an assistant until all was ready for the final dressing. The appendix, about an inch and a half in length, and not much softened, contained, near its apex, an oblong hard fæcal mass about the size of a large white bean ; and over the greatest diameter of this mass was a small round perforation through all the coats of the appendix. The patient is making an uneventful recovery.

STRETCHING SCIATIC NERVE IN SCIATICA.

Dr. Bristow presented a patient to show that sometimes stretching of the sciatic nerve does good in sciatica. The history of this case was a curious one. In September last he was employed in a white lead factory. There were seven barrels coming down an inclined plane and he put his foot out and tried to stop them as they came down. Afterwards he had a sharp pain in his foot, but no swelling and no sign of injury. Shortly afterwards, violent sciatica set in and he came into Dr. Rand's service in the Kings County Hospital. From the fact that he had been working in a white lead factory and that lead poisoning might be at the bottom of the trouble he was treating him with this possibility in mind. No lead was found upon examination of the urine, either before or after the administration of the iodide of potassium.

His own impression in regard to stretching of the sciatic nerve was that it was of very little use in these cases, and he did nothing further for the man for some time except to put him on general tonic treatment. After a while his pain was so severe that he proposed stretching the nerve, telling him that although failures to relieve were many, sometimes this did do good. He decided to have it done and on January 15th Dr. Bristow stretched the sciatic nerve. In eight days the sutures were removed ; there was primary union ; and up to this time (two months) he has been completely relieved of pain. At the time it was done he was confined to his bed, unable to walk around, was a cripple ; now he is practically free from pain and can go without a cane. He could not be sure that this relief will be permanent, but as far as the operation was concerned, it was entirely trivial in its consequences to him, and even if he had no better result than a period of two months release from suffering he would be thankful. The nerve was stretched to 38 pounds by the dynamometer.

TWO CALCULI.

Dr. Rand showed two calculi, not so much on account of the stones as on account of the history of the case. The patient who was referred to him by Dr. Fitsimmons was a man forty-nine years of age, and for about two years had suffered from what he considered an irritable bladder. The searcher showed a stone to be present, which was about three-quarters of an inch in diameter. He had intended to examine the patient with the cystoscope before operation, and if he had done so it would have changed his method of dealing with the case. The patient was averse to lithotomy and he consented to attempt a litholapaxy. He crushed one stone with some difficulty, as it was very hard, but was unable to get anything but a curved evacuating tube into his bladder, and for that reason could not wash out the last fragment. Thinking he had only a last fragment left he did a perineal section. The perineal distance was over four inches, and it was not possible to get the finger into the bladder. He passed in a pair of forceps and seized this second stone, which was lying snugly behind the prostate, and after that was able to suck out the last fragment through a straight tube introduced through the perineal wound. This stone is one inch in its longest diameter and three-eighths of an inch thick being flat in form. The conditions here seemed fairly favorable for crushing. A small stone, apparently only one, and a tolerant bladder. Urinalysis had shown the stone to be probably uric acid, and while such can be crushed there is considerable danger to the patient from the resulting sharp fragments being thrown against the bladder with more or less force during evacuation. This is one argument against the operation of crushing in very hard calculi as compared with that of lithotomy. If such a stone is very small he thought one ought to give the patient the benefit of the crushing rather than the cutting operation, but he never again would attempt to crush a stone, even of this size where he believed it was uric acid or oxalate of lime. This patient was a fat, flabby man, and the perineal distance was a great surprise to him. The forceps used were introduced over five inches before I could feel that they were free within the bladder. His perineum was especially flabby and dependent, and yet no amount of pressure enabled him to pass the finger into the bladder, although rectal examination had shown very moderate enlargement of the lateral lobes of the prostate.

The size of these stones certainly would not justify the suprapubic operation, because he thought such can be removed with safety through a median perineal incision, and the patient's convalescence is much more speedy and much more comfortable. Dr. Rand believed one can generally keep a patient fairly dry after suprapubic lithotomy, but it is with a good deal of trouble and difficulty. Cases in which one can suture the bladder and have primary union are not corrected.

Had a cystoscopic examination been made in this case and the shape, location and number of the stones seen, the operation of median lithotomy would have been elected ; and the more he sees these cases the more he is impressed with the fact, that a preliminary cystoscopic examination repays one as a rule for the additional trouble it gives. The stone in its greatest diameter was rather large to be safely extracted through a median incision, but on account of its shape its actual diameter was only about three-quarters of an inch.

Dr. Rand stated that every one agrees to the lateral operation as compared with the median in cases of stone of certain size, but thinks with a stone three-quarters of an inch or less in diameter, the median operation being attended with much less hæmorrhage, carrying with it no danger of resulting impotence and being followed by much more prompt healing, is to be preferred.

MISCELLANEOUS.

BROOKLYN, N.Y.

VITAL STATISTICS FOR SECOND QUARTER OF 1894.

BY GEORGE E. WEST, M.D.,

Secretary Department of Health.

		April.	May.	June.
Reported	Births	1649	1689	1624
	Deaths	1634	1610	2028
Deaths from	Small Pox	25	6	8
	Measles	38	36	48
	Scarlet Fever	36	21	13
	Diphtheria	84	94	130
	Croup	33	30	25
	Whooping Cough	17	21	29
	Typhoid Fever	5	10	6
	Puerperal Fever	12	14	9
	Diarrhœal Diseases	12	22	209
	Pneumonia	243	205	152
Reported Cases of	Small-Pox	97	41	10
	Measles	1025	870	765
	Scarlet Fever	299	276	196
	Diphtheria	252	285	335
	Typhoid Fever	12	20	19
Death rate of	Brooklyn	19.5	18.2	23.7
	New York	22.2	20.6	22.2
	Philadelphia	19.1	17.0	21.6
	London	18.6	17.4	16.0
	Paris	24.8	22.0	19.7

MEDICAL EXCURSION TO BERMUDA.

Dr. J. B. Mattison is arranging another excursion of medical men to Bermuda, to sail Thursday, December 13th, and return Thursday, January 3d. Specially low cost, and other advantages offered for a delightful Winter outing. Details, if desired.

Dr. John Y. McGay died on October 13th, at his home in Brooklyn, forty years of age.

NEW YORK COLONY FOR EPILEPTICS.

The Legislature of New York State has passed and the Governor signed the bill establishing a Colony for Epileptics in that State. The Colony is named after the late Oscar Craig, President for some years of the State Board of Charities. The bill provides for the purchase of a tract of 1,875 acres of beautiful land in the Genesee Valley, near Mount Morris, in Livingston County. This tract is all in one piece, well watered by brooks, and consisting of fine fields, woodland and orchards, and already provided with picturesquely grouped buildings to the number of thirty-five. It has been a colony of the Shakers for twenty or thirty years, and is, therefore, perfectly adapted to its new use.

The law requires that all of the buildings put up shall be on the village plan. A board of five managers is provided for, and these have already been appointed. The managers serve without salary and meet at the Colony once or oftener monthly. The Governor appointed as the board of managers: Dr. Frederick Peterson, of New York; Mrs. C. F. Wadsworth, of Geneseo; Geo. M. Shull, of Mount Morris; Dr. Chas. E. Jones, of Albany, and W. H. Cuddeback, of Buffalo.

An important provision in the bill is that the managers may accept any bequests of persons interested in the welfare of epileptics, and it is believed that many charitable, wealthy people will build cottages upon the splendid sites on the tract to bear their names and exist as lasting memorials to their desire to serve humanity in this wise.

A medical superintendent, steward, matron, pathologist, nurses, school teachers, teachers of various industries and arts, and so on, are to be appointed as needed; but the Colony will not be ready probably to receive patients before the autumn of 1895.

It is thought that the Colony will ultimately number fifteen hundred to two thousand members. As soon as possible the six hundred epileptics in the county almshouses will be taken in charge. Later private patients will be received at prices corresponding to the accommodations asked for. It is sure to become self-supporting in the course of time, and to grow into an industrial and agricultural village that will more than rival the similar and famous Colony at Bielefeld, Germany, upon which this is, to a certain extent, modeled.

At their organization in Albany, on the 3d of May, the Board of Managers made Dr. Frederick Peterson, of New York, President, and George M. Shull, of Mount Morris, N. Y., Secretary, of the Board.

EUROPHEN AS A SUBSTITUTE FOR IODOFORM.

Although iodoform is regarded as an excellent agent for local application in syphilitic and tubercular affections, such as ulcers, and also in wounds, still its odor has always been so objectionable that its use in private practice has been to a great extent abandoned. We notice in White's Materia Medica, edited by Prof. R. W. Wilcox, of New York, a second edition of which has just been published by P. Blakiston, Son & Co., that europhen is used for like purposes and in the same quantities as iodoform. It is said by the author to be a powerful germicide and bactericide. When dry it is permanent, but when moistened, it splits up into iodine and a new soluble iodine compound. It is without any disagreeable odor, and seems to possess the advantages of iodoform without its disadvantages. Indeed, if the statement of White is true, it has decided advantages over iodoform in that it is a germicide, while this property of iodoform is in dispute. It is used in powder form, as an ointment with vaseline or lanoline, 10 to 15 per cent., and with olive oil, 5 per cent. as an injection in tertiary syphilis.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

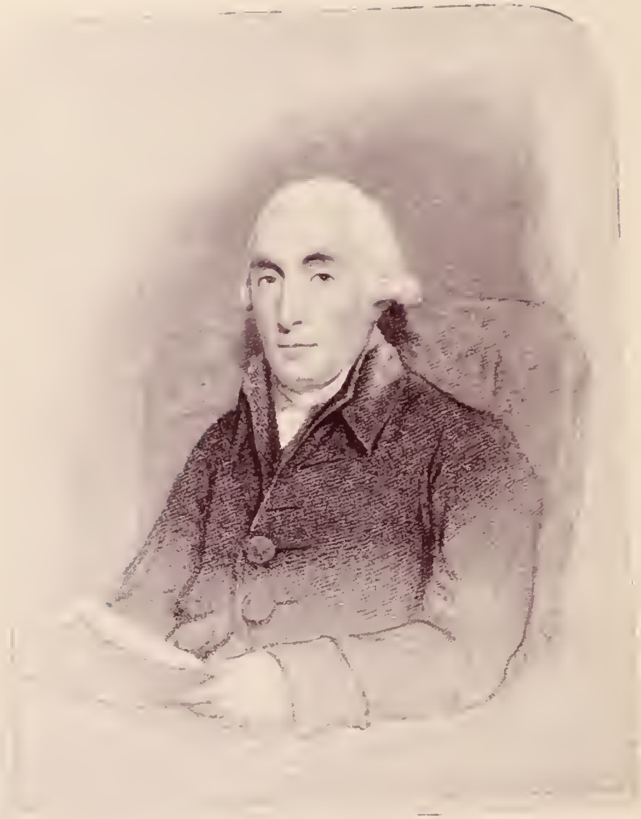
The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1895, provided that an Essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the Secretary of the College, Dr. Charles W. Dulles, on or before May 1, 1895.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1894, has been awarded to Dr. G. E. de Schweinitz, of Philadelphia, for his Essay entitled: "Toxic Amblyopias."



JOSEPH BLACK, M.D.